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The Technical Services

THE TRANSPORTATION CORPS: RESPONSIBILITIES, ORGANIZATION, AND OPERATIONS

by

Chester Wardlow

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. . . to Those Who Served

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THE TRANSPORTATION CORPS: RESPONSIBILITIES, ORGANIZATION, AND OPERATIONS

MAJ. GEN. CHARLES P. GROSS, *Chief of Transportation for the Army during World War II.*

Foreword

The matter of transportation at home and abroad becomes one of first importance when war strikes. The strain on the transportation systems and the conflict of civilian and military demands become immediate and serious problems. In two world wars the United States has had to solve many of these problems after hostilities began, and therefore to solve them in haste, by trial and error.

As new and improved means of transport are introduced, the questions of military transportation become more difficult. The horse and mule had their shortcomings, but their use involved few of the complications that bedevil the military in this machine age. The armed forces must have not only adequate equipment but also replacement parts to keep that equipment operating in the field. Efficient use of transportation necessitates co-ordination within the armed forces and between military and civilian agencies. During World War II much was done to increase effective use of ships, railway cars, and motor vehicles, but efforts to balance the competitive demands of civilian and military traffic in the zone of interior were only partially successful.

Careful planning is necessary to reduce difficulties such as those which beset us in 1917 and 1941. The present volume, first of this series to deal with the Army's technical services, begins an account of the transportation problems of the Army and their solution in World War II, including those of inter-Allied co-ordination. Between the covers of this book is to be found information that will contribute substantially to our planning and preparation for transportation emergencies in the future.

ORLANDO WARD
Maj. Gen., U. S. A.
Chief of Military History

Washington, D. C.
1 August 1951

Preface

This volume is the first of three concerning the Army Transportation Corps in World War II. It delineates the nature of the transportation task, the functions and organization of the Transportation Corps, and its operating problems and relationships in the zone of interior. A second volume will deal with the execution of troop and supply movements in the zone of interior and to the oversea commands, the organization and training of Transportation Corps troops, and the development, procurement, and distribution of Transportation Corps matériel. A third volume will describe Transportation Corps organization and activities in oversea theaters and bases.

The reader quickly will discern that the discussion is not confined strictly to the Transportation Corps. There are several reasons. A Chief of Transportation was not designated by the Army until three months after the United States entered the war, and many important developments took place during 1940 and 1941 when Army transportation was a responsibility of The Quartermaster General, acting under the supervision of the Supply Division (G–4) of the War Department General Staff. Transportation was so vital an element in the military program that throughout the war higher echelons of the Army took an active interest in and exercised a measure of supervision over the development and activities of the transportation organization. Policies and decisions affecting transportation were in fact Army policies and decisions, whether they were enunciated by the Chief of Transportation, the Commanding General of the Army Service Forces, the Chief of Staff, the Under Secretary of War, or the Secretary.

Another reason for the breadth of the discussion is the extent of collaboration that was necessary between the Transportation Corps and other governmental agencies. The Interstate Commerce Commission, the Office of Defense Transportation, the Maritime Commission, the War Shipping Administration, and the War Production Board were civilian agencies which exercised a broad control over the services and facilities used by the Army for the movement of its troops and matériel. The Naval Transportation Service operated some of the vessels utilized by the Transportation Corps, and the two organizations participated in numerous other joint logistic arrangements. The Joint Chiefs of Staff and the Combined Chiefs of Staff dealt with many matters which directly affected the activities of the Transportation Corps. A close liaison was necessary with the British Ministry of War Transport, whose vessels were used extensively by the United States Army. The activities of these agencies and the Army's relations with them are important parts of the Transportation Corps' history.

The working relationships of the Transportation Corps with other governmental agencies, although they proceeded with a high degree of co-operation, involved matters concerning which there were divergent interests and differing opinions. Some differences pertained to policy and others to method; some were very important and others less so; some were satisfactorily adjusted during the

war and others were not. Though an attempt has been made not to give undue prominence to these differences, their historical importance is obvious. Sometimes they explain why things were done in a certain way, or were not done. Often they point to potential disputes, even weaknesses, which should be taken into account in planning for possible future emergencies.

Although this discussion covers a broad field in presenting the significant developments which affected the movement of troops and military supplies, it is in no sense a full history of the nation's wartime transportation effort. The primary purpose is to present the experience of the Transportation Corps as reflected in Army records, which in itself is a broad assignment. In such a study it is inevitable that the views of the Chief of Transportation and his associates should be more fully stated than those of other officers and agencies. Where controversial matters are involved, however, the basic issues should appear with fairness to all parties.

While the general plan has been to present only facts and opinions found in the records, there has been some digression from that procedure. The recollections of Transportation Corps officers and of civilians who held responsible positions under the Chief of Transportation have been used to supply details not found in the records and to clarify obscure passages. Reports of the interviews with those consulted are on file. The author's experience as a member of the executive staff of the Chief of Transportation throughout the war has helped him greatly in understanding and evaluating developments, but recollections of events and attitudes have not been allowed to take the place of documentary evidence. Personal observations are confined almost entirely to the comments on policies and methods of the Chief of Transportation and his relationships with Army Service Forces headquarters that appear in Chapter III and to the general conclusions presented in the final chapter.

Many of the statistical data which have been used, while from responsible sources, were compiled during or shortly after the war and so may differ somewhat from figures which more deliberate research may make available. It is believed that these variations are inconsequential. Readers interested in data which have a greater degree of finality will be able to find them in the statistical volumes that are being prepared for publication as part of the series, UNITED STATES ARMY IN WORLD WAR II.

It is impossible to acknowledge in detail all the generous assistance which the author has received, during the preparation of this volume, from military and civilian colleagues and from the staff of his own office. Aside from acknowledgments made in the footnotes, special thanks are due to the following: Dr. Harold Larson, who prepared a number of monographs on Army transportation by water, and who at present is working on the third volume of the Transportation Corps trilogy; Dr. Harold H. Dunham, Dr. James R. Masterson, and Mr. Joseph Bykofsky, who have written monographs on Army transportation in certain oversea theaters; and Capt. William H. Schmidt, whose wartime monographs deal with various aspects of Army transportation in the United States. Final editing of the volume was in charge of Mr. W. Brooks Phillips, who was assisted by Miss Michael

Burdett and Mrs. Pauline Dodd; Mr. George Powell was most helpful in the checking of charts and statistical data; and Mr. David Jaffé prepared the index. Miss Marie Premauer, Mrs. Lois Riley, and Mr. John Lee performed many services indispensable to preparation of the manuscript and production of the book.

Since the account in this volume is necessarily compact, rather extensive footnotes have been provided. In connection with the effort which is being made under the Secretary of Defense to develop greater integration in the transportation services of the Army, the Navy, and the Air Force, many aspects of transportation are currently undergoing careful study. Should the nation become involved in another major war, the records pertaining to transportation in World War II will take on added significance. The author believes that the documents cited in this volume, and the files in which they are located, will be of considerable assistance to future students of military transportation.

Numerous technical terms have been used in the text and the footnotes. Rather free use has been made of abbreviations, especially to avoid too frequent repetition of the long titles of wartime agencies and officials. The identification of the numerous files and records in which cited documents are located also has involved the use of terms and abbreviations which are not generally familiar. The reader will be aided in these respects by reference to the Glossary of Technical Terms, the List of Abbreviations, the Bibliographical Note, and the Guide to Footnotes, which are appended.

Washington, D. C.
1 February 1951

CHESTER WARDLOW

Contents

Chapter		Page
I.	TRANSPORTATION IMPLICATIONS OF GLOBAL WARFARE	1
	Transportation as a Factor in Strategy	2
	Magnitude of the Army's Transportation Task	10
	The Role of Long-Range Planning	18
	Relative Advantages of the Contending Powers	23
II.	ANTECEDENTS OF THE TRANSPORTATION CORPS	28
	Army Transportation in World War I	28
	Developments Preceding Pearl Harbor	35
	The Early Months of the War	42
	Transportation Service Established	50
	Transportation Corps Created	54
III.	THE OFFICE OF THE CHIEF OF TRANSPORTATION	56
	Initial Responsibilities	57
	Delegation of Authority to the Army Air Forces	59
	Additional Responsibilities	62
	The Headquarters Organization	68
	The Chief of Transportation and His Policies	73
	Relations with Other Elements of the Army Service Forces	78
	Relations with the Oversea Commands	82
IV.	THE FIELD ESTABLISHMENT	95
	Ports of Embarkation	95
	Transportation Zones	111
	Other Field Agencies	123
	Supervision by Headquarters	126
	Demobilization Planning and Adjustments	132
V.	THE CRITICAL ROLE OF SHIPPING	135
	Early Military Requirements	136
	Preparations for Amphibious Operations	144
	The Submarine Threat	148
	The Shipbuilding Achievement	153
	Central Control of Ship Employment	163
	Co-ordination of Port Utilization	176
	Co-ordination of Ship Repair and Conversion	181
VI.	RELATIONS WITH OTHER SHIP-OPERATING AGENCIES	186
	Relations with the War Shipping Administration	186
	Relations with the Navy	200
	Naval Convoy and Routing Arrangements	212
	Relations with the British Ministry of War Transport	220

Chapter | Page

VII. OPERATION OF THE ARMY'S LARGE AND SMALL VESSELS 228
Civilian Crews on Ocean-Going Vessels 229
Maintenance and Voyage Repairs 239
Supplies for Vessels 241
Food Service on Transports and Hospital Ships 243
Armament and Gun Crews 245
Radio Service and Radar 247
Assignment and Operation of Small Boats 249
Manning of Small Boats 255
Proposals Regarding Marine Personnel 260

VIII. OTHER MARINE OPERATIONS AND PROBLEMS 262
Pier Operation and Stevedoring 262
Efficient Utilization of Vessels 271
Control of Ship Utilization in the Theaters 282
Ship Conversions 299

IX. UTILIZATION OF DOMESTIC COMMERCIAL CARRIERS 308
Distribution and Control of Inland Traffic 308
Basic Relations with the Railroads 312
Wartime Expansion of Railroad Traffic 319
Limited Capacity of the Western Railroads 323
Procurement of New Railroad Equipment 328
Railroad Manpower 335
Efficient Utilization of Railroad Equipment 341
Temporary Government Control of the Railroads 349
The Highway Carriers 353
Inland Waterways and Airways 367
Relations with Federal Regulating Agencies 370

X. THE ARMY'S RAILWAY AND HIGHWAY OPERATIONS 375
Utility Railroads 375
Army Tank Cars 381
Army Hospital Cars 385
Railroad Repair Shops 391
Motor Buses for Local Transportation 394
Administrative Vehicles 402

XI. OBSERVATIONS AND CONCLUSIONS 406

Appendix

A. FUNCTIONS OF SUPERVISORY OFFICERS AND DIVISIONS, OCT, 1 JULY 1945 415

B. WARTIME COMMANDERS, PORTS OF EMBARKATION, ZONE OF INTERIOR 423

Appendix *Page*

C. TRANSPORTATION ZONE TERRITORIES AND OFFICERS 424

D. INSTALLATIONS SUBORDINATE TO ZONE TRANSPORTATION OFFICES, AUGUST 1945 425

BIBLIOGRAPHICAL NOTE 426

GUIDE TO FOOTNOTES 429

GLOSSARY OF TECHNICAL TERMS 432

LIST OF ABBREVIATIONS 435

INDEX 441

Tables

No.

1. Distribution of Personnel of the Office of the Chief of Transportation: Designated Dates in 1945 74
2. Personnel Employed at Port Installations: 31 December 1944 110
3. Distribution of Personnel Among Transportation Zones: 31 March 1945 122
4. Employment of Ocean-Going Passenger and Dry-Cargo Shipping Under U.S. Control on Selected Dates: 1943–1945 175
5. Average Tons of General Cargo Loaded per Net Gang-Hour at U.S. Ports on Vessels Loaded for the Army by Contracting Stevedores: July 1943–March 1945 265
6. Average Cost per Ton of Loading Army Cargo by Contracting Stevedores at Principal U.S. Ports: 1944 267
7. Analysis of Cost of Loading Army Cargo by Contracting Stevedores at U.S. Ports: 1944 269
8. Time Spent at U.S. Loading Ports by Dry-Cargo Vessels Loaded at Army Ports of Embarkation and Sailed During the Period February–December 1944 282
9. Percent Distribution of Intercity Passenger and Freight Traffic in the United States, by Type of Carrier: 1940–1945 309
10. Indexes of Passenger and Freight Traffic in the United States: 1940–1945 310
11. Equipment Requirements of the American Railroads (All Classes) as Stated by the Office of Defense Transportation, and Actual Production: 1942–1944 332
12. Production of Nonmilitary Trucks, Trailers, and Buses in the United States: 1936–1944 362

Charts

No.		Page
1.	Organization of the Office of the Chief of Transportation: 30 June 1942	52
2.	Organization of the Office of the Chief of Transportation: 1 July 1945	69
3.	Typical Organization for Ports of Embarkation, Approved by the Chief of Transportation: 1 July 1945	102
4.	Typical Organization for Zone Transportation Offices, Approved by the Chief of Transportation: November 1943	121
5.	Utilization of Deadweight and Bale Cubic Capacities of Ships Loaded by the Army at U.S. Ports: December 1941–August 1945	277
6.	U.S. Dry-Cargo Ships Employed in Transoceanic Service for the Army Held in Oversea Ports More than Ten Days: February 1943–July 1944	286
7.	Status of Dry-Cargo Vessels Loaded by the U.S. Army at U.S. Ports for Discharge in Northern Continental Europe: 1 September 1944–31 March 1945	290

Illustrations

Maj. Gen. Charles P. Gross, Chief of Transportation	ii
Amphibious Operations—Normandy and Leyte	13
Oversea Ports—Khorramshahr and Naha	21
Battered Railroad Yards in France and Italy	24
Peacetime Ports of Embarkation	36
Troop Entrainment—December 1941	43
Military Railway Service Equipment	89
Hard Going on Oversea Highways	92
Wartime Army Ports of Embarkation—Oakland and Newport News	98
Reactivated Army Bases—Boston and New Orleans	108
Transportation Corps Field Installations	118
Prewar Army Transports	137
Convoy Forming off a U.S. Atlantic Port	150
War-Built Cargo Ships	157
Troopships in the U.S. Pool	166
Troopships Operated by the Navy	202
Largest Troopships Afloat	223
Instruction in Navigation and Marine Engines	234
Boats Built for Theater Service	252

	Page
Tight Stowage of Packaged Freight	275
Crated and Uncrated Equipment Stowed on Deck	278
Army Hospital Ships	302
Flatcars Moving Bulky Equipment	322
The Bracing and Lashing of Large Equipment	346
Motor Transport for Short Hauls	360
Locomotives for Utility Railroads	377
Army Hospital Car	388
Army Buses for Local Transportation	399

Most of the illustrations in this volume were supplied by the Department of Defense. Of these, all are U.S. Army photographs except the following.

U.S. Navy: pp. 89 (bottom), 150, 166, 202, 302 (bottom)

U.S. Air Force: pp. 98 (top), 118 (bottom), 137 (bottom), 275 (bottom).

Photographs from other sources:

U.S. Maritime Commission: p. 157.

U.S. Maritime Service: p. 234.

Higgins, Inc., New Orleans, La.: p. 252 (bottom).

Association of American Railroads: p. 346 (top).

Stage and Howe, Los Angeles, Calif.: p. 360 (top).

General Electric Company: p. 377 (bottom).

THE TRANSPORTATION CORPS:
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CHAPTER I

Transportation Implications of Global Warfare

The ability of the United States to turn the course of World War II toward victory for the Allies was dependent on the adequacy of the transportation facilities made available to our armed forces and the efficiency with which those facilities were used. Manifestly, success was dependent also on the training and skillful employment of military personnel and on the quantity and quality of the war matériel produced for the use of our own forces and those of our allies. Yet our forces could not accomplish their mission until they had been transported to the combat areas overseas, and among the several elements which entered into the formula for victory it fairly may be said that transportation, especially shipping, was the most critical.

Shipping was a constant source of concern to those planning military operations. There never was serious doubt that, given the time necessary for recruitment and training, the United States could develop a fighting force capable of coping with the forces of the enemy. Nor was there any doubt that, allowed a sufficient period for conversion from a peacetime to a wartime basis, American industry could outproduce that of the hostile powers. But for more than a year after our entry into the war there was grave doubt as to our ability to construct troop and cargo vessels rapidly enough to offset the losses inflicted by submarines and build up a shipping capacity adequate for the defeat of Germany and Japan.

In June 1942 Lt. Gen. Brehon B. Somervell, commanding the Army's Services of Supply, said, "The losses by submarine sinkings threaten failure of our war effort." [1] In the spring of the following year he reported, "Our plans to carry out a determined and effective offensive during 1943 and to strike further decisive blows in 1944 are measured almost entirely by the shipping which can be made available for military operations." [2] Later in 1943 the Senate Subcommittee on War Mobilization announced, "We can never have more ships than are needed for all-out offensive warfare," and warned against allowing our increasing output of merchant vessels to lull us into an attitude of complacency.[3] In October 1944 General Somervell stated to Gen. George C. Marshall, the Army Chief of Staff: "Operations in both the Atlantic and the Pacific are accepting monthly deficits in their shipping schedules. Yet, new

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[1] Memo for CofS USA, 18 Jun 42, OCT 569. 14 Losses.

[2] Memo for CofS USA, 25 Mar 43, sub: Proposed Allocation of U.S. Shipping, ASF Hq CofS file 1942–43.

[3] *Report from the Subcommittee on War Mobilization to the Committee on Military Affairs, U. S. Senate,* October 7, 1943, pp. 3, 5.

demands on shipping develop almost daily." [4]

In fact, as subsequent discussion will show, even up to the time of Germany's collapse ocean transport was a limiting factor in our oversea military effort. Although at times the troops or the cargo ready at the ports failed to fill completely the available ship space, such situations were local and temporary, and in the strategic planning ship capacity usually was short of what was desired.

While shipping presented the most acute problem, inland transportation also was under constant strain, which increased as hostilities continued. During World War I failure to control rail traffic and to utilize rail equipment efficiently resulted in serious congestion, particularly along the Atlantic seaboard, thereby causing delay and confusion in the movement of supplies to Europe.[5] A similar and probably worse situation would have arisen during World War II had not effective measures been taken to prevent it. As a result of these measures, despite the unprecedented volume of traffic and the severe limitation on the production of new transportation equipment, the railway, highway, and inland waterway carriers were able to meet the military requirements as they arose. This might not have been so had Japan attacked or seriously threatened our west coast during the early days of the war, for at that time the carriers west of the Mississippi had little reserve capacity. But the fact that the Japanese were preoccupied with the extension of their holdings in Asia and the western Pacific, added to the strategic decision of the Allies to consider the defeat of the European Axis their first objective, made it possible for domestic transportation to remain fluid and effective after the shock of our sudden entry into the war had passed.

"In global warfare considerations of strategy and transportation are inseparable," said Maj. Gen. Charles P. Gross, Chief of Transportation, U.S. Army, during the period of hostilities, in his final report.[6] Brief examination of this relationship, as exemplified in World War II, is essential background for a discussion of the responsibilities and accomplishments of the Transportation Corps. Since under the prevailing circumstances the availability of adequate transportation was a basic factor in the formulation of most of the important strategic plans and decisions that were made during the course of the war, the following review can touch upon only certain major aspects of the subject.

Transportation as a Factor in Strategy

Transportation has been a factor in strategy since that period of history when fighting men carried their equipment on their backs and lived off the countries in which they were engaged. The importance of this factor has risen as the scope of hostilities has been widened and the burden of military impedimenta has been increased. In both respects World War II was in a class by itself. It was the first truly global war, during which American troops were deployed virtually throughout the world. The increased mechanization of the forces,

[4] Memo, 24 Oct 44, sub: Increased Requests for Shipping, ASF Hq Shipping 1944.

[5] *Report of the Chief of Staff of the U.S. Army to the Secretary of War, 1919* (Washington), pp. 112–14; Benedict Crowell and Robert F. Wilson, *The Road to France* (New Haven, 1921), pp. 112–16.

[6] *Report of the Chief of Transportation, Army Service Forces, World War II*, 30 November 1945, p. 2. The report, issued when Gross retired from the Army, is cited hereafter as Gross final rpt.

the greater weight of weapons and ammunition, and the fact that little or no matériel was available in many areas where our troops fought, meant that for the support of each soldier sent into a theater of operations far more equipment and supplies had to be shipped from the zone of interior than in any previous war.[7]

Following the Japanese attack on our Pacific outposts and our precipitation into a two-ocean conflict, military demands on the United States far exceeded resources. On the Atlantic side there was the necessity of supplying Britain and the Soviet Union with war matériel to enable them to continue their resistance against the German forces, together with the desirability of opening an active second front as soon as possible in order to relieve the pressure on our European allies. On the Pacific side there was the need of checking the extension of Japanese aggression with as little delay as possible and of preventing the consolidation of gains already made. These jobs could not be tackled equally without danger of failure in both. The preponderance of our limited strength had to be thrown in one direction or the other. The decision to attack Germany first and assume a strategic defensive in the Pacific was made initially on purely military grounds before Pearl Harbor, but when the matter came up for discussion at the British-American conferences in late December 1941 it was evident that transportation was an important consideration favoring that decision.[8]

The transportation considerations included more than simply the limited number of ships available for a two-ocean war.[9] Since distances were much shorter in the Atlantic than in the Pacific, a given number of vessels could transport more men and supplies to the combat areas in a given period. Large-scale operations in the Pacific would involve many assault landings and the discharge of troops and cargo at poorly equipped ports and over beachheads, which meant slow dispatch of the vessels and correspondingly longer round voyages. The capacities of the ports on our Pacific coast and the rail lines which fed those ports were not then equal to the task of handling a major offensive to the west. The nature of the war in the Pacific required the presence of the major portion of the United States Fleet in that area, and therefore our western ports were required to handle a large supply operation in support of our naval forces in addition to whatever demands the Army might make upon them.

From the beginning of World War II it was a generally accepted doctrine that troops would not be sent overseas unless there was assurance that they could be

[7] Rpt, Transportation, Comparative Data, World War I–World War II, pp. 12, 16, prepared by Contl Div OCT, Jul 43, OCT HB MPR. The report indicates that during 20 war months in 1917–18 the Army shipped 2,052,830 troops and 8,883,297 MT of cargo to oversea destinations, while in a corresponding period, 1941–43, it shipped 1,769,901 troops and 26,688,794 MT. Recent research in OCMH has refined the 1941–43 figures to 1,761,132 troops and 26,573,995 MT.

[8] Rpt of U.S.–British Stf Convs, Jan–Mar 41, 27 Mar 41 (ABC–1), P&O GSUSA; ARCADIA Proceedings, 24 Dec 41, An. 1. Mark Skinner Watson, *Chief of Staff: Prewar Plans and Preparations,* UNITED STATES ARMY IN WORLD WAR II (Washington, 1950), Ch. IV, indicates that in the summer of 1940 General Marshall already had concluded that in a war against Germany and Japan the defeat of Germany should be the first objective.

[9] See typescript monograph, Col M. B. Stokes, Jr., C of Plng Div, OCT, Shipping in War—The Relationship Between Shipping and the Logistical Operations and Strategy of World War II, 21 Mar 46, OCT HB Topic Logistics Gen.

supplied adequately at all times.[10] This was a departure from the plan which had been followed in the first world war, and it reflected the conviction which prevailed after Pearl Harbor that virtually all equipment and the great preponderance of other supplies required by the American expeditionary forces would have to be shipped from the zone of interior. Under these circumstances it was necessary to establish and maintain a careful balance between troop and freight carrying vessels. Such balance did not exist when the United States entered the war, and even after a practical balance had been achieved it was difficult to maintain, because of changes in strategic plans and the variation of ship completion and ship loss figures from the forecasts. An approximate balance was held by emphasizing the construction of cargo ships and converting such ships to troop carriers when the need for additional troop capacity became apparent. The alterations on cargo ships were begun while the ships were under construction, and the time required to place such vessels in service was much less than that required to build vessels designed as regular troopships.

Continuance of the lend-lease policy of sending large quantities of food, raw materials, and equipment to the Soviet Union and the nations of the British Commonwealth after our entry into the war was a strategic decision of major importance, since it not only diverted supplies from our own armed forces but deprived them of sorely needed shipping. The officers responsible for Army transportation took an extremely serious view of this situation. A few days after the declaration of war they gave the Chief of Staff a summary in which shipping was termed the bottleneck in the oversea effort, and the conflict between the shipping requirements for the lend-lease program and those for the maintenance of United States forces in the theaters was presented in bold terms.[11] Despite the extreme seriousness of the situation in the Far East during the winter of 1942, a movement of additional troops to that area received a shipping preference secondary to that for Russian aid. The early planning for the dispatch of American and British troops to French North Africa was governed by a ruling of President Roosevelt and Prime Minister Churchill that there should be no stoppage in the flow of supplies to the Soviet Union and the Middle East.[12] In March 1943 the Chief of Transportation indicated that the increasing demand for shipping aid to the British, if accepted, would imperil military operational plans resulting from discussions at the Casablanca Conference during the preceding January.[13]

At times during the critical year 1942 as much as one-third of the ocean-going dry cargo fleet under the control of the War Shipping Administration was allocated to lend-lease services. While the conflict between Army and lend-lease shipping programs eased somewhat as the output of the American shipyards mounted and the rate

[10] See Memo, C of Trans Br G–4 for ACofS G–4, 21 Dec 41, sub: Estimate of Shipping Available for U.S. Overseas Effort 1942 and 1943, Sec. IV, par. 1, G–4/29717–116.

[11] Memo, ACofS G–4 for CofS USA, 11 Dec 41, sub: Shipping Situation, OCT HB Gross Day File; see also Memo, ACofS G–4 for CofS USA, 12 Jan 42, par. 5d, sub: Capacity of Shipping, G–4/29717–116.

[12] Memo, ACofS G–4 for Rear Adm Sherwoode A. Taffinder USN, 14 Feb 42, OCT HB Gross Day File; CCS Mtg, 23 Jan 42, Item 5.

[13] Memo, CofT for CofS USA, 17 Mar 43, sub: CCS 183/1–Review of Availability of UN Shipping, OCT HB Gross Day File.

of sinkings fell off, it never was completely removed.[14]

Notwithstanding the decision to undertake the defeat of Germany first, our position in the Pacific soon became so serious that it was necessary to divert some vessels from the Atlantic and to reduce planned movements to the United Kingdom and Iceland proportionately. This decision was made at a meeting held at the White House on 12 January 1942, attended by the President, the British Prime Minister, and their principal military and civilian advisers.[15] The first convoy from the east coast to the Pacific, consisting of seven troopships, sailed from New York on 22 January 1942, and a second convoy consisting of five ships sailed from New York on 3 March 1942. Both convoys were destined to Australia, but the greater part of the troops was to proceed thence to New Caledonia to assure the defense of that island, then under the control of the Free French.[16] In the American-British discussions, New Caledonia was termed a tempting bait for the Japanese because of its rich nickel mines, and it was pointed out that the enemy's seizure of the island would necessitate moving all reinforcements to the Southwest Pacific by the long route south of New Zealand, and thus would render more acute the already serious shortage of shipping. During the first six months of 1942, ships carrying a total of approximately 40,000 troops were dispatched from New York to the Pacific. Some cargo vessels also sailed from Atlantic coast ports with supplies for the Pacific.[17]

This early effort to increase our resistance to the Japanese advance was reflected clearly in the deployment of shipping in the service of the Army. On 30 April 1942 the ocean-going cargo and troopships serving the Army in the Pacific areas totaled 1,891,473 deadweight tons capacity, while those serving in the Atlantic areas totaled only 677,776 deadweight.[18] The former figure embraced not only the vessels diverted from the Atlantic during the winter of 1942, but also a number of the larger British and American transatlantic liners which had been employed in the Pacific and Indian Oceans prior to that time and were being held there for the completion of planned movements of American and British troops.[19] Even at this early period Gen. Douglas MacArthur was pleading for the assignment of additional vessels to the Southwest Pacific, which he considered necessary to the execution of planned operations within the theater. The Chief of Transportation was exploiting every means of meeting those requests, but with only partial success.[20]

Under these circumstances the early contributions to the build-up of American strength in the United Kingdom, a project designated by the code name BOLERO, were modest indeed. The first contingent of 4,058 troops departed on two vessels which sailed from New York on 15 January 1942

[14] WSA Monthly Shipping Summary shows distribution of vessels under control of that agency.

[15] Memo, CofS USA for ACofS WPD, G–3, and G–4, 13 Jan 42, G–4/33983.

[16] ARCADIA Proceedings, 11 Jan 42, pp. 5–6. Unusual routing is explained in Memo, G–4 for CofS USA, 18 Feb 42, G–4/33888.

[17] Certain types of matériel were in short supply at this time and CofT had difficulty finding balanced cargoes for the available ships. See OCT HB Gross Australia.

[18] Army Service Forces Monthly Progress Report, Sec. 3, Transportation, 30 Apr 43, p. 16, hereafter cited as ASF MPR, Sec. 3.

[19] ARCADIA Proceedings, 12 Jan 42, An. 1, and 14 Jan 42, p. 2.

[20] File OCT HB Wylie Australia Mar 42–Jul 44 reflects this situation.

for Belfast, Ireland. A second group of nine vessels with 8,555 troops sailed from New York for Belfast on 19 February 1942. During the ensuing two months only small numbers of casuals left New York for the United Kingdom, and the next considerable movement was on 29 April, when 13,924 Army personnel were embarked on eight vessels, among them the British liner *Aquitania* which had just been returned from the Pacific. The large British liners *Queen Mary* and *Queen Elizabeth*, after the completion of assignments in the Pacific, entered the New York–United Kingdom service in May and June, respectively. For several months thereafter the mammoth "Queens" and an increasing number of smaller vessels landed substantial contingents of American troops in the United Kingdom.[21]

After a slow start because of the critical situation in the Pacific, the build-up of American strength in the United Kingdom again was delayed because of the invasion of North Africa. The North African expedition had been discussed by the United States and British Chiefs of Staff on numerous occasions during the winter and spring of 1942 under the code names GYMNAST and SUPERGYMNAST, and agreement to proceed with the undertaking, under the new name TORCH, was arrived at in the following July.[22] The earlier discussions had contemplated the landing of limited numbers of American and British troops with French collaboration.[23] The plan finally adopted called for larger task forces, prepared to land against French resistance. The threat to the British position in Egypt from Axis forces based on Italian Libya, the possibility of a German invasion of Morocco and Algeria through France and Spain, and the strategic advantage of opening the Mediterranean to Allied ships serving the Middle and Far East were factors in this decision.[24]

The period 27 October 1942 to 30 April 1943 witnessed the embarkation of 761,000 American and British troops destined to North Africa and the forwarding of 8,195,000 measurement tons of matériel for their support.[25] These were men and supplies which otherwise might have been sent to or retained in the United Kingdom. A total of 73,869 U.S. troops had been landed at British ports in August 1942, but this substantial flow declined thereafter; it became a mere trickle during the winter of 1942–43 and did not again attain the August figure until a full year had passed.[26] A corresponding reduction took place in the movement of cargo from the United States to the United Kingdom. Accordingly, a cross-Channel operation to establish an invasion force in northern France, which had been planned originally for the summer of 1943 under the code name ROUNDUP, was de-

[21] For list of troopship sailings, see Summary of Historical Events and Statistics, NYPE, 1942, pp. 10–11, OCT HB NYPE.

[22] *Biennial Report of the Chief of Staff of the United States Army, July 1, 1941 to June 30, 1943*, pp. 18–19. Two such reports were issued by General Marshall during the war period, cited hereafter as *Biennial Rpt, CofS USA, 1943*, or *1945*.

[23] ARCADIA Proceedings, 24 Dec 41, pp. 4–5, and 26 Dec 41, An. 2.

[24] *Biennial Rpts, CofS USA, 1943*, p. 18, *1945*, p. 9. OCT estimated that opening of Mediterranean would reduce shipping requirement 30 percent for shipments from U.S. and 40 percent for shipments from UK by eliminating long voyage around Cape. Memo, DCofT for Gen Moses, 9 Dec 42, sub: Saving of Ships when Allies Contl Med, OCT 563.5.

[25] ASF MPR, Sec. 3, May 43, pp. 85–86.

[26] Historical Report of the Transportation Corps in the European Theater, Vol. III, Ch. VII, p. 16, OCT HB ETO; for schedule of BOLERO troop movements prior to decision on TORCH, Stf Conf, CG SOS, 26 Jun 42, Sec. 6, OCT HB ASF.

ferred until the spring of 1944 and renamed OVERLORD.[27] While many considerations contributed to this deferment of the main assault on the Continent, including the demands for men and matériel for combat areas in the Mediterranean and the Pacific, ocean transport was fully committed during the period and was in itself an effective block to the more rapid accumulation of strength in Great Britain.[28]

After the surrender of enemy forces in North Africa in May 1943, the operations were carried across the Mediterranean in an effort to force Italy out of the war. At the TRIDENT Conference of American and British leaders held in Washington in that month, when the strategic plans for the continuance of the effort in the Mediterranean and in northern Europe were outlined, it also was decided to maintain an unremitting offensive pressure on the Japanese in the Pacific and to increase the flow of matériel to China.[29] It was feasible at that time to plan with reasonable definiteness for all of these undertakings because of the improvement in the shipping situation. American shipyards had so greatly increased their output that the total completions for 1943 were expected to be more than twice those in 1942. Also it was fairly evident that the efforts of the Allies to curb the submarine were becoming increasingly effective. Nevertheless it still was necessary to use the available shipping most judicially, and those concerned with planning for ocean transport constantly were engaged in calculating what deployment of vessels would accomplish maximum results.

The increased volume of shipping which became available to the Army during 1942 and early 1943 was all needed for TORCH, BOLERO, and support of the bomber offensive from the United Kingdom, designated SICKLE. On 30 April 1943 the tonnage of the merchant vessels serving the Army in the Pacific was slightly less than it had been a year previous, whereas the tonnage employed in the Atlantic had increased more than five-fold.[30] Very soon, however, because of the continued growth of the merchant fleet and strategic decisions of the Allies, the volume of shipping employed in the Pacific began a steady rise. On 30 April 1945, with Germany still putting up a last-ditch resistance, the shipping that served the Army was divided about equally between the Atlantic and the Pacific, with just under 7,000,000 deadweight tons employed in each area.[31]

The steadily increasing volume of shipping assigned to the Pacific by the Army, together with the merchant vessels serving the Navy,[32] made possible the vigorous campaigns northward from Australia and westward from Hawaii that enabled the Allied forces to advance within easy striking distance of the Japanese homeland even before the termination of hostilities in Europe. The end of German resistance set in motion a carefully laid plan for the redeployment of troops, matériel, and ship-

[27] *Biennial Rpt, CofS USA, 1945,* p. 11.

[28] Memo, ACofS OPD for CofS USA, 18 Dec 42, sub: Shipment of Trs to UK, OPD 370.5 ETO Sec 1, stated that additional troop lift would be available if (1) escorts could be provided from British or other sources, (2) cargo shipping could be augmented by reducing lend-lease or other requirements, (3) initial equipment of troops could be reduced.

[29] CCS 242/6, 25 May 43, sub: Final Rpt to President and Prime Minister, Sec. IV 3a, b, and Sec. V 9; *Biennial Rpt, CofS USA, 1945,* p. 11.

[30] ASF MPR, Sec. 3, Apr 43, p. 16.

[31] ASF MPR, Sec. 3; Apr 45, p. 55.

[32] There was a high degree of interchangeability in the utilization of the ships assigned respectively to Army and Navy in Central and Southwest Pacific, a fact which later chapters will amplify.

ping in order to place the preponderance of our war strength in the Pacific with the least possible delay. This operation was well under way when Japan surrendered.

One of the essentials in the preparation for the final assault on Japan was the establishment of an advance base or bases adequate for the build-up of personnel and supplies and the eventual launching of the invasion. In May 1944 the Joint Strategic Survey Committee suggested that the seizure of Formosa and the bypassing of the Philippines might hasten the end of hostilities in the Pacific.[33] Despite the shorter distance from Formosa to the objective, the recapture of Luzon was considered the sounder strategy, and among the advantages taken into account were the better port and inland transportation facilities which Luzon offered.[34]

Strategic considerations were reflected in a number of transportation projects on the North American continent. Alaska was the northern anchor of our war operations in the Pacific. Even before Pearl Harbor the potential importance of Alaska was recognized and the strengthening of our military position in that territory was begun. Men and matériel were moved by the water route, but the feasibility of establishing a highway connection from a point on the Canadian National Railways to Fairbanks was given preliminary consideration.[35] Soon after our entry into the war, the possibility that the Japanese might attempt an invasion of Alaska and that their submarines might seriously interfere with our shipping services, as well as the desirability of conserving shipping wherever possible, brought the so-called Alcan Highway project to the fore. In February 1942 the Chief of Engineers was instructed to prepare plans for such a highway, and by October 1942 initial construction work had been completed over the entire length of the 1,480-mile pioneer road.[36] The Canol project, under which the United States financed pipelines connecting Norman Wells, Watson Lake, White Horse, Skagway, and Fairbanks, and a refinery at White Horse, also was an attempt to provide against the day when the movement of gasoline and other petroleum products to Alaska by the water route might be limited by enemy action.[37] Since the Japanese made no attempt to invade the Alaskan mainland and since the anticipated submarine menace did not eventuate, neither the Alcan Highway nor the Canol installations played an important role in the supply of our forces in that area. A barge line which was operated by the Army from Seattle and Prince Rupert over the inside passageway to Juneau, Excursion Inlet, and Skagway handled an appreciable tonnage, but it did not attain the importance which was envisioned in the early days of the war.[38]

The strategic importance of Alaska as a vantage point from which to move supplies

[33] JCS 713/6, 29 May 44; JCS 713/15, 22 Sep 44. Both in P&O GSUSA, ABC 384 Formosa (8 Sep 43), Sec 1c.

[34] *Logistics in World War II, Final Report of the Army Service Forces* (1947), p. 52.

[35] Memo for file, Trans Br G–4 WDGS, 8 Dec 41, sub: Alaskan International Highway, summarized actions taken to date, OCT HB Alaska–Alcan Hwy and Ry. See also Charles B. Quattlebaum, "Military Highways," *Military Affairs* (Fall 1944).

[36] Memo, CofT for ACofS SOS, 27 Aug 42, sub: Org and Opn of Alcan Hwy, OCT 611 Alaska 1942 Alcan Hwy. File G–4/30436–21 includes numerous documents on early phases. For summary of cost, maintenance, and operation see Ltr, Julius H. Amberg, Asst to SW, to Sen James M. Mead, 26 Apr 45, ASF Contl Div 032.3 Mead Com.

[37] See Plng Div ASF file, Canol Project, 1942 and 1943–44. See also Report of Senate Special Committee Investigating the National Defense Program, *The Canol Project,* January 8, 1944.

[38] See file AG 567 Alaska 1942 for pertinent documents.

to the Soviet Union and China gave rise to a number of other transportation projects which were not actually undertaken. A proposal was brought forward in 1942 to construct a standard gauge rail line connecting the Canadian National Railways with the Alaska Railroad at Fairbanks.[39] Although the project was believed to be feasible from an engineering standpoint, it was dropped because of the length of time that would be required for completion, the great quantity of strategic materials involved, and the fact that it did not appear to be a definite military necessity. The feasibility of extending the railway and the highway from Fairbanks to a port on the west coast of Alaska was explored to some extent but not seriously considered.[40]

The Panama Canal's great stategic significance, the possibility that communications with Central America might be seriously curtailed by submarine activity, and the importance of maintaining stable conditions in the Central American countries led the United States to take an interest in the completion of the Pan-American Highway as far as Panama. In July 1942 the Chief of Engineers was instructed to initiate construction work on completion of pending negotiations with the countries concerned. The movement of construction materials from the United States proceeded slowly because of the scarcity of such materials and of shipping. By mid-1943 the curbing of the submarine had canceled whatever immediate military importance the undertaking may have had, and Army participation was terminated in October of that year.[41] The danger that the National Railways of Mexico would prove inadequate to handle the traffic in which the United States was interested, particularly the strategic materials imported from Mexico for our war industries, led to an undertaking to aid the rehabilitation of that system by providing technical personnel and equipment from the United States.[42]

After the confusion incident to the transition from peace to war, and with the establishment of an adequate system for the control of portbound traffic, the railways and the ports in the eastern part of the United States proved capable of handling all oversea movements promptly. Such was not the case in the west, however. In peacetime a much lighter export traffic had moved through the Pacific coast ports, and their railway facilities in particular required considerable expansion in order to properly handle the volume of freight which was expected to move that way when a full-scale offensive against Japan was launched.[43] Correction of this situation be-

[39] Memo, ACofS G–4 for WPD, 7 Jan 42, G–4/33820; Memo, the President for SW, 12 Feb 42, OCT HB Alaska–Alcan Hwy and Ry; Ltr, SW to Secy State, 28 Apr 42, OSW C&R Railroads; Ltr, Gen Somervell to F. A. Delano Chm Natl Resources Plng Bd, 15 May 43, ASF Hq Alaska.

[40] Memo, CofT for CG SOS, 10 Sep 42, sub: Northwest Route via Alaska–Siberia, OCT 370.5 Russia; Memo, Admiral King for JCS, 21 Sep 42, sub: Campaign against Japan via Northern Route, ASF Hq Navy 1942–44; Memo, Somervell for CofS USA, 5 Oct 42, OPD 520 Sec 1 (Cases 1–24); Memo, CG SOS for CofS SOS (Styer), 6 Oct 42, AG 611 Alaska (8–11–42) (1); Memo, Col R. T. Maddocks OPD for ACofS OPD, 4 Jan 43, sub: Northwest Route to China via Russia, OPD 520 Sec 1 (Cases 1–24). Admiral King's memo suggested value of this route in attacking Japan via Kamchatka Peninsula. Maddocks' memo cited problem of obtaining Soviet concurrence.

[41] See files OCT 611 Pan-Am Hwy and ASF Hq Pan-Am Hwy. General Gross states that he never considered the highway necessary from TC standpoint. See Ltr to author, 7 Dec 49, OCT HB TC Gen Gross.

[42] See files OCT 000.900 Mexico 1942 and AG 617 Mexico 1942.

[43] Subject more fully discussed in Ch. IX.

gan in 1942 with the installation of additional storage tracks at the principal ports by joint action of the Army and the railroads. The transcontinental carriers also took steps to increase their line haul. These improvements continued throughout the war. Nevertheless, in planning for the final blows against Japan it was necessary to provide for the routing of some of the cargo destined to the Pacific bases through Gulf and Atlantic ports.

The foregoing brief review illustrates how basic transportation was to the conduct of the war and how the adequacy of the transportation facilities available to the Army conditioned strategic planning and operations.

Magnitude of the Army's Transportation Task

The task which fell to the Transportation Corps in World War II was described by Robert P. Patterson, the Under Secretary of War, as one "entirely without precedent in the history of our country." [44] It was in fact a transportation task without precedent in the history of the world. This was due to many conditions and circumstances, but primarily to the scope of hostilities and to recent developments in the art of warfare. It will aid in the understanding of the Transportation Corps' operating problems and accomplishments to review these conditions and circumstances briefly.

World War II was actually global in its scope. The first world war had been so designated because the belligerents included nations from all continents, but the focal point of the fighting during 1914–18 was Europe. In the second world conflict every continent was an actual or potential battleground, and many an island which previously had been known only to historians, geographers, or explorers flashed into the news headlines as the scene of bitter fighting. In addition, numerous continental areas and islands were garrisoned and fortified either to prevent their seizure by the enemy or to secure them as bases for our globe-girdling aerial operations.

Hostilities on such a wide scale naturally called for large armed forces. In order to carry out its mission in World War II, the U.S. Army inducted roughly two and one-half times as many troops as it had called up in World War I. On 31 October 1940, just before the drafting of recruits under the Selective Service Act began, the strength of the Army was 519,805. Thenceforward to 31 May 1945, when the Army reached a peak strength of 8,291,336, nearly ten million men and women were placed in uniform.[45] This huge army had to be transported during the various stages of training, moved to the oversea theaters and bases as strategic and logistic plans required, and eventually returned to the zone of interior. At all stages it had to be provided with supplies and equipment adequate for the task at hand.

The more elaborate training given by all branches of the Army before the men were sent overseas resulted in more domestic travel per man in World War II than in World War I. Basically, the training of 1917–18 called for three moves in the zone

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[44] Ltr to CofT, 15 Aug 45, OCT HB TC Gen Commendations.

[45] Rpt, STM–30, Strength of the Army, 1 Jul 45, p. 61; WD press release, 14 Feb 46, gave accessions 1 Nov 40 through 30 Jun 45 as 10,033,640, and separations as 2,279,700, but it is believed that these figures include some duplications; Leonard P. Ayers, *The War with Germany* (Washington, 1919), Ch. I, states that about 4,000,000 served in U.S. Army during WW I.

of interior—from home to cantonment, from cantonment to specialized training camp, and thence to the port of embarkation.[46] The typical trainee of 1941–45 made five basic moves—from home to induction station, and thence successively to reception center, replacement training center, unit training center, and port of embarkation. Furthermore, in World War II many soldiers had to be transported to specialized training centers for desert, mountain, jungle, and amphibious warfare; to schools for the study of technical subjects and military occupational specialities; and to maneuver areas.[47]

Almost three and one-half times as many soldiers were sent overseas in World War II as in World War I. The Army embarked roughly 7,293,000 passengers for oversea destinations during the 45-month period, December 1941 through August 1945, of whom 6,902,000 were officers and enlisted men.[48] About 350,000 of these soldiers were moved to stations on the North and South American continents or to near-by island bases, but the great majority crossed the Atlantic or the Pacific. Approximately 4,300,000 troops were transported to Europe, Africa, and the Middle East over distances ranging from 3,100 to 12,000 nautical miles. About 2,000,000 were transported to stations in or across the Pacific where the sea lanes ranged up to 6,500 miles. About 250,000 were transported halfway around the earth to India. In all cases the troops were accompanied by their initial supplies and equipment and were supported subsequently by regular shipments of maintenance matériel.

Delivering the men and their matériel to the respective theaters and bases was only part of the ocean transportation job. One of the distinguishing characteristics of World War II was the repeated advances from established bases to new combat areas within the theaters. These intratheater operations might involve ocean voyages of a few miles as in the invasion of Normandy, several hundred miles as in the Mediterranean, or several thousand miles as in some of the Pacific operations which were mounted in Hawaii and Australia. The floating equipment which had to be provided for such operations ranged from native outriggers used off the coast of New Guinea to large ocean liners and included many types of transports and landing craft which were specially designed to meet the peculiar requirements of amphibious warfare. This large and complex task of ocean transportation may be compared with the relatively simple task of 1917–18, which involved moving the American Expeditionary Forces directly to Europe by steamship services which operated in shuttle fashion over distances averaging about 3,300 nautical miles.

Intratheater movements of men and matériel in some instances involved long overland hauls. The use of Casablanca as one of the discharge ports for the North African expedition necessitated rail and highway movements up to 1,400 miles. The delivery of supplies to Kunming over the Burma Road, and later over the Stilwell Road, called for truck hauls of 710 and 1,070 miles respectively. Lend-lease supplies sent to the USSR through the Persian Cor-

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[46] Crowell and Wilson, *The Road to France*, pp. 51–67.

[47] Because of lack of uniformity in actual training an accurate comparison is difficult, but this is believed to be a fair presentation. In addition to these official moves, each soldier made one or more furlough trips.

[48] Gross final rpt, p. 42. Slightly over 2,000,000 troops were carried to Europe in 19 months of WW I. See Ayers, *The War with Germany*, p. 37.

ridor moved over 575 miles of railway to Tehran and 636 miles of highway to Kazvin, where they were turned over to representatives of the Soviet Union. In these and other instances, because of the inadequacy of the local transportation systems, American personnel, equipment, and supplies were required in order that the operations might be accomplished efficiently.

The fact that World War II required garrisons to be established in so many primitive and undeveloped places added to the transportation load, because the large amount of construction work required to make those garrisons effective had to be accomplished chiefly with personnel, equipment, and materials shipped from the United States. Docks and warehouses had to be constructed at ports and beaches which previously had handled little or no deepwater shipping. Roads had to be built through tropical jungles and over arctic wastes. Airstrips, gun emplacements, and housing had to be provided. Machinery for generating electric power, distilling water, and refrigerating foods had to be installed. Storage tanks for oil and gasoline had to be set up, and pipelines laid. Bulldozers, concrete mixers, pile drivers, and other heavy equipment were needed to facilitate the work. A competent estimate places the number of installations built by the U.S. Army Engineers in oversea areas during the war at over 4,000.[49] The Corps of Engineers shipped more than 18,000,000 measurement tons of cargo overseas during the war. The highest monthly movement was 775,000 tons.[50]

Aside from the fact that their use involved extensive construction work, the new oversea ports were slow in discharging army cargo while they were being developed, with the result that round voyages for the ships were unduly prolonged. This problem was encountered on a wide scale in the Pacific, but it was present also in Alaska, Greenland, Iceland, the Antilles, West Africa, the Persian Gulf, and wherever military port operations were undertaken beyond peacetime capacities. It existed also at large and formerly well equipped ports, such as Naples, Marseille, Cherbourg, and Manila, which were in badly damaged condition when they were seized from the enemy and required extensive rehabilitation before they could be used effectively by Allied shipping.

Among the new developments in warfare which added to the transportation load was the amphibious assault. Although land and sea forces had co-operated in such assaults down through the centuries as circumstances required, the military exigencies of World War II dictated a much more extensive use of this tactic than had been known before, and with greater use came a vast improvement in technique, including the addition of air power.[51] Large amphibious operations required the assembling of hundreds of vessels to move troops and matériel during the assault and support phases. Many of these vessels had to be withdrawn from regular transoceanic service for weeks or even months, and some had to be altered to prepare them for this special type of service. Since most amphib-

[49] Ltr, Hist Div OCofEngrs to Hist Br OCT, 21 Mar 47, OCT HB Topic CofEngrs.

[50] ASF Statistical Review, World War II, p. 129.

[51] For general description of mounting large amphibious force see Roy E. Appleman, James M. Burns, Russell A. Gugeler, and John Stevens, *Okinawa: The Last Battle,* UNITED STATES ARMY IN WORLD WAR II (Washington, 1948), pp. 36–43; for technical details see WD FM 31–5, Landing Operations on Hostile Shores, Nov 44, and Transport Quartermaster Manual, issued by Army Port and SvC, Honolulu, Nov 44, OCT HB Topic Amph Opns.

AMPHIBIOUS OPERATIONS *such as these marked the opening of numerous campaigns in both the Atlantic and Pacific areas. Landing supplies and equipment on the coast of Normandy (top). Beach operation at Leyte (bottom).*

ious operations were launched from bases outside the United States, the troops and supplies reached the objective by two or more voyages, rather than a single direct voyage.

The ships employed in assaults on enemy-held positions were combat loaded, which meant that insofar as possible the troop units and their organizational equipment were placed in the same vessels and that the impedimenta were stowed in such a manner that they could be unloaded quickly and in the order required.[52] The impedimenta included not only the strictly military equipment necessary to the capture of the objective but also a great number of small landing boats for putting men and matériel ashore, and a great variety of wheeled and tracked vehicles needed to give the attacking force mobility after landing. For this type of cargo and stowage it was necessary to sacrifice up to 35 percent of the normal cargo capacity of the ships, as compared with commercial loading.[53]

World War II was the first great conflict during which the U.S. Army was extensively motorized. Men, artillery, and supplies literally went into action on wheels, powered by internal combustion engines. With the Allied forces in France and Flanders on 31 October 1918 the ratio of men to motor conveyances—trucks, automobiles, and motorcycles—was about 37 to 1.[54] With the American forces in the European Theater of Operations on 30 April 1945 the ratio was about 4.3 to 1.[55] During World War I—that is, up to the Armistice—the United States Government accepted less than a hundred tanks from American manufacturers, and no other self-propelled motor-propelled weapons were completed, whereas during the five-year period ending 31 July 1945 about 136,000 tanks and other self-propelled weapons were produced for the Army.[56] These comparisons illustrate the increase of motorization as between the two wars. The significance of the increase from a transportation standpoint lay in the fact that such equipment was bulky and took up a large amount of space when moved by ship or rail; the requirements of personnel, tools, and spare parts for assembling and maintenance work were heavy; and the engines consumed fabulous quantities of motor fuel and lubricants.[57]

World War II brought military air power to maturity. The United States Army, which had less than 3,000 aircraft on hand at the beginning of 1940, received more than 227,000 new aircraft during the five-year period ending 31 July 1945, and on the eve of V-E Day the military personnel

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[52] As the war progressed increasingly large percentages of the vessels used in assault operations were specially designed naval vessels rather than merchant types. See *Biennial Rpt, CofS USA, 1945*, p. 73, for types of vessels used in seizure of Leyte.

[53] In the assault on Makin 46 percent of basic ship capacity was sacrificed—an unusually high percentage due to extensive use of cargo pallets. See *Makin*, Hist Div SSUSA, American Forces in Action Series (Washington, 1946), p. 27.

[54] *Report of the Military Board of Allied Supply* (Washington, 1924), I, 49, indicates that on that date the Allied forces numbered 8,516,678 officers and men and had a total of 229,452 motor conveyances.

[55] *American Enterprise in Europe—The Role of the SOS in the Defeat of Germany* (Paris, 1945), pp. 16, 64, gives the number of men as 3,065,505 and the number of motor vehicles as 710,650. Compare Dwight D. Eisenhower, *Crusade in Europe* (Garden City, 1948), p. 501, n. 21.

[56] Benedict Crowell and Robert F. Wilson, *The Armies of Industry* (New Haven, 1921), pp. 132, 199; Rpt, Munitions for the Army, prepared in OUSW, 9 Apr 46, p. 4, OCT HB WD Gen USW.

[57] Against the increased transportation load caused by motorization, there is a partial offset due to the great reduction of animals and forage as military cargo.

of the Army Air Forces exceeded 2,300,000.[58] By way of contrast, during World War I the United States produced less than 14,000 trainer and service planes, and Air Service strength at the time of the Armistice was under 200,000.[59] With their equipment and personnel deployed around the globe, the Army Air Forces in World War II made heavy demands on land and water transportation. As in the case of motor vehicles, aircraft were bulky cargo and the requirements of personnel, spare parts, gasoline, and lubricants were heavy. In the United States railroad cars and trucks were specially equipped to assure the safe transportation of delicate assemblies. Thirty-six cargo ships were converted to accommodate assembled planes in their holds, while hundreds of cargo ships and tankers were specially fitted to carry aircraft as deckloads. Although the Air Transport Command handled an increasing amount of passenger and freight traffic as the war progressed, and emergency movements by air were of utmost military importance, the volume of air traffic was small compared with Army Air Forces' movements handled by surface carriers.

The destructiveness of warfare reached a new level in World War II. It was a war of movement and the tempo of the fighting was high. Aided by motorized equipment, the combat units moved farther and faster than ever before and were on the move more of the time.[60] The greater weight and accuracy of artillery fire produced devastation wherever the ground forces went into action and called for an amount of ammunition hitherto undreamed of.[61] The range of the bomber subjected military objectives within and far outside the combat zones to attack from the air.[62] The swifter tempo of the fighting produced greater attrition in weapons and other mechanisms.[63] It was common practice for a retiring force to destroy or damage local facilities which might be of service to an invading force. Insofar as this greater destruction and attrition affected the facilities, equipment, or supplies of our own armies, it meant that prompt replacement had to be made in order to maintain fighting efficiency, and this was an added burden on transportation. The same was true in the case of facilities such as docks, railroads, and power plants which were demolished while in enemy hands and which had to be rehabilitated by our own advancing forces with materials brought forward over our own lines of communication.

In a report following the defeat of the Axis Powers, General Marshall referred to our superiority "in mobility and in fire power." [64] This phrasing concisely sets forth one of the most important of the many tactical accomplishments of the war—the successful combination of power and mobility. Until recent times weight of weapons and flexibility were thought to be antagonistic factors in combat; it seemed that one had to be sacrificed in favor of the other. But the larger actions of the war, particu-

[58] Rpt, Munitions for the Army, prepared in OUSW, 9 Apr 46, pp. 3, 5, OCT HB WD Gen USW; United States Air Force Statistical Digest, 1947, pp. 27, 28.

[59] Ayres, *The War with Germany*, Ch. VII.

[60] See Maj B. Corol and Maj I. Agibalov, "Tempo of Offensive Operations," *Military Review* (September 1944).

[61] See statement by USW, WD press release, 13 Nov 44.

[62] On 9 Jul 45 the AAF dropped the 2,000,000th ton of bombs on enemy objectives, WD press release, 10 Jul 45.

[63] See Donald M. Nelson, "The High Cost of Victory," *The Reader's Digest* (December 1943).

[64] *Biennial Rpt, CofS USA, 1945*, p. 95.

larly in Continental Europe, proved that under modern conditions they are not incompatible, and the burden of that proof rested on transportation—water, rail, and motor. In demonstrating that large and heavily armored forces could be moved quickly and over great distances, with supporting supplies and replacements always available, military transportation assumed a task in organized movement such as never before had been undertaken.

Whereas in World War I more than half the equipment and supplies required by the American Expeditionary Forces in Europe was procured from European sources,[65] in 1941–45 the requirements of our armies overseas were met overwhelmingly by shipments from the United States. In World War II substantial quantities of certain supplies were obtained from the various components of the British Commonwealth and France, and smaller quantities from other areas, under reverse lend-lease,[66] but this local procurement constituted only a small percentage of the total matériel required by our widely dispersed forces. Some of the areas occupied by our troops normally were capable of producing only what was required by the local populations. Some areas had suffered so greatly from the ravages of war that their agricultural and industrial productivity was far below normal.

Not only did the United States have heavy shipping requirements for the support of its own oversea operations, but also for extensive help to other nations. Reference has been made to the demands placed upon shipping by the lend-lease program under which approximately fifty billion dollars' worth of equipment and supplies was sent to nations which were actively fighting the Axis. This program competed with the Army for bottoms. Furthermore, the Army moved millions of tons of supplies on vessels under its own control for the aid of the impoverished civilian populations and for the re-equipment of the armed forces of countries which had been occupied by the Axis Powers until released by Allied forces. By 31 July 1945, with the war still going on in the Pacific, the Army had shipped nearly 6,000,000 long tons of civilian supplies to liberated and occupied areas, mostly in Europe.[67] The shipments for the month of July alone totaled 1,205,026 long tons—largely of wheat, flour, and coal. These cargoes from the United States were supplemented by cargoes from British sources, and all of them occupied ship space which could have been profitably employed by the armed forces.[68]

Because of the heavy fighting and the strange and trying climatic conditions to which American soldiers frequently were subjected, World War II called forth unusual efforts on behalf of health and morale. The aim—only partially satisfied—was to

[65] The General Purchasing Agent, AEF, reported that between June 1917 and 31 December 1918 the AEF received from U.S. 7,675,410 MT of matériel, and that during the same period 10,192,921 MT were procured in Europe with a saving of that amount of transatlantic ship space. See *Report of the Military Board of Allied Supply* (Washington, 1925), II, 229, 246.

[66] The President's *Twenty-second Report to Congress on Lend-Lease Operations,* June 14, 1946, p. 20; *Biennial Rpt, CofS USA, 1945,* p. 100. About 61 percent of total reverse lend-lease was furnished by the UK, on dollar value basis.

[67] Civilian supplies shipped as a military responsibility declined rapidly after the Japanese surrender. See WD Prog Rpt, Sec. 4–F, Civilian Supply, 31 Dec 46, pp. 12, 14.

[68] On 22 Mar 45, CofT ASF writing to CofT ETOUSA, referring to the pressure for large shipments of civilian supplies said: "It is becoming a battle between the feeders and the fighters." OCT HB Gross Day File.

provide the troops with hot meals, including fresh meats and vegetables, wherever the circumstances of their employment made this possible. The bulk of such supplies, as well as the equipment for preserving and preparing them, was shipped from the United States. Good shelter was important, particularly in cold and rainy areas, and at hundreds of stations throughout the world mobilization type barracks were built, frequently with American lumber, and thousands of quonset huts and prefabricated houses of American manufacture were set up. Supplies for up-to-date medical care and complete hospital facilities followed the troops wherever they went, and The Surgeon General's shipments to oversea stations amounted to 50,000 measurement tons in the peak month, or the capacity load of five large cargo vessels.[69] The American youth is accustomed to a full quota of recreation, and supplies for that purpose were provided at all Army stations—athletic goods, motion picture equipment, theatrical properties, books, magazines, soft drinks, ice cream, etc. The best builder of soldier morale—mail from home—was encouraged, with only moderate restrictions on the size of packages. The Army ports of embarkation shipped a monthly average of about 65,000 measurement tons of mail during the winter of 1944–45, and in November 1944, when Christmas mail was moving, they shipped more than 178,000 measurement tons.[70] These and other provisions for the welfare of soldiers created demands for transportation, within the zone of the interior and to the oversea bases, in addition to the demands for the movement of strictly military matériel.[71]

The possibility of a broken supply line to one of our transoceanic theaters was a threat which had to be taken into consideration until the war was well advanced. With our troops deployed to many distant lands and largely dependent on supplies shipped from the zone of interior, this peril was very real. The Army's task was not only to supply the current needs of the fighting forces but to establish in them a confidence that all future needs would be met. Such confidence contributes to the soldier's will to fight, and lack of it may lower his efficiency.[72] It cannot be claimed that Army transportation never failed in this respect. Surrender of the Philippines was hastened by inability to move matériel to that distant outpost through the enemy blockade. Success in the campaigns at Guadalcanal and Buna was seriously threatened by difficulties in getting supplies to the troops. After these early campaigns, however, our supply lines to oversea combat areas were quickly established and were maintained intact. This became possible in part because of the effective protection given to our shipping and the great shipbuilding achievement which added many more vessels than the enemy sank, but it was due in large measure also to effective strategic and logistic planning in which transportation was always a basic consideration.

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69 ASF MPR, Sec. 3, Sep 44, pp. 26–27.

70 Tabulation, Cargo Shipped by Army, in ASF MPR, Sec. 3, for respective months.

71 Shipment of morale items was not entirely at the expense of military items, since some could be stowed as filler cargo in spaces left empty by stowage of bulky equipment.

72 Maj. Gen. J. C. F. Fuller of the British Army has presented this point in a dramatic manner. In *The Reformation of War* (London, 1923), p. 164, he says: "In war, the chief concern of the soldier is not to kill, but to live. He fixes his eyes on the communications of the army to which he belongs, and is terrified if they are threatened by the enemy."

The Role of Long-Range Planning

World War II, because of its geographic scope, the complexity of its military operations, the strain which it placed on the resources of the Allied nations, and other characteristics which have been mentioned, called for planning of great range and perspicacity. This planning had to be broad enough to comprehend the entire field of hostilities and meticulous enough to insure that the requirements of each operation were provided for. Improvisation and opportunism had no place in the strategic concept, though they might become necessary in the execution of that concept.[73] Careful calculation and recalculation were the basis of each military undertaking. The planning embraced the build-up of our troop strength, military supplies, and means of transportation, together with the co-ordination of these elements to avoid idleness and waste.

The object of transportation planning was first to determine the deployment of forces that could be undertaken with the transportation resources likely to be available, and then to assure that when the time to launch an operation arrived the commander could proceed boldly and with confidence in his logistic support. The Axis Powers had failed in certain aspects of their long-range planning, including that for transportation. The swift victory in France in June 1940 found Germany with no well-developed program for the invasion of Britain and no suitable and adequate marine equipment for the purpose, a failure which had a pronounced influence on the course of the war.[74] Germany also underestimated the transportation problems involved in carrying the invasion of the Soviet Union to a successful conclusion. The Japanese occupied numerous bases in the Pacific and the East Indies which proved to be of little or no value to them strategically but rather created logistic problems with which they eventually were unable to cope because of their shrinking merchant marine.[75] It was careful long-range planning on the part of the Allies which enabled them to avoid such mistakes and to perform huge transportation tasks repeatedly and with conspicuous success.

Planning for Allied operations proceeded on three levels—international, national, and within each armed service. The work on each level contributed to that on the level above and conditioned that on the level below.

Although certain general understandings had been reached earlier, American-British planning for specific military operations was initiated during the first month of the war when the Prime Minister and his military staff met with the President and his advisers in Washington to discuss the Allied strategy. It was continued at the frequent meetings of the Combined Chiefs of Staff, which began functioning early in 1942, and at the occasional conferences between the President, the Prime Minister, and the heads of other Allied powers. The broad strategic

[73] JCS 30, 5 Apr 42, JSP Rpt. On general subject see Col G. C. Shaw, *Supply in Modern War* (London, 1938), pp. 334, 340.

[74] U.S. Strategic Bombing Survey, Interv 55, 27 Jun 45, with Generalfeldmarschall Wilhelm Keitel, pp. 10, 11; postwar essay by Admiral Karl Doenitz, "Conduct of the War at Sea" (Div of Naval Int USN), 15 Jan 46, pp. 9, 10; statement by British Prime Minister, in Hansard, *Parliamentary Debates* (House of Commons), 18 Nov 46, pp. 52–53.

[75] Regarding Axis failures, see *Biennial Rpt, CofS USA, 1945*, pp. 1–4; also, Hanson W. Baldwin, "Foe's Errors Aid Us," *The New York Times*, August 30, 1945.

programs and agreements resulting from these conferences and meetings were designed to utilize the combined resources of the participating powers to the best advantage of the Allied cause as a whole. From the beginning, transportation—particularly ocean transportation—was one of the basic ingredients of every strategic plan; and it was one of the most difficult to deal with because of the critical shortage of ships, the uncertainty as to the extent of ship losses by enemy action, and the competing demands of the lend-lease and civilian shipping programs. The operation of the merchant fleets of the United States and the British Commonwealth, together with such neutral passenger and cargo vessels as could be brought under Allied control, as a large and flexible pool of shipping was one of the more notable logistic accomplishments of the war.[76]

On the national level, long-range military planning was fostered by and centered in the Joint Chiefs of Staff, which also functioned as the American component of the Combined Chiefs of Staff. JCS exercised a broad control over the strategic and logistic planning and operations of the U.S. armed forces, with direct responsibility to the President as Commander in Chief. One of the basic tasks of JCS, as the over-all planning and co-ordinating agency for the military efforts of the Army and the Navy, was to insure that the armed forces had the ocean transport needed for their operations. On the one hand this involved determining as far in advance as possible the amount and types of merchant shipping required and arranging with the U.S. Maritime Commission for the construction of such new vessels as were needed; and on the other hand it involved arranging with the War Shipping Administration for the allocation of specific amounts of shipping to the Army and the Navy from the pool of vessels which was operated under the control of that agency.[77] The Joint Chiefs of Staff also undertook to co-ordinate Army and Navy supply and transportation operations, particularly in the Pacific, in order to avoid unnecessary duplication and waste, but it was less successful in this than in other endeavors because of basic differences in the logistic practices of the two services.

On the War Department level the primary responsibility for transportation planning naturally rested with the Chief of Transportation. He worked in close co-ordination with the elements of the Army Service Forces headquarters and the Operations Division of the War Department General Staff, which were concerned with planning for the movement of military personnel and matériel within the zone of interior and to oversea stations. It was his task to see that numbers of men and tons of freight were translated into terms of shipping space and to arrange that adequate transportation should be available for the execution of each projected operation. The Chief of Transportation was the most active War Department representative on the Joint Military Transportation Committee and the Combined Military Transportation Committee, which prepared studies and proposals for consideration by the Joint Chiefs of Staff and the Combined Chiefs of Staff.

[76] For discussion of pooling under the Allied Maritime Transport Council in WW I, see J. A. Salter, *Allied Shipping Control* (Oxford University Press, 1921), Pt. IV.

[77] The work of CCS and JCS and their subsidiary organizations in regard to transportation will be more fully discussed in Ch. V.

A strong planning staff, maintained in the Office of the Chief of Transportation, kept abreast of military developments and provided both General Somervell and General Gross with transportation data for their planning activities on the War Department, national, and international levels. Gross had established this staff in the spring of 1941 as a section of the Transportation Branch of the Supply Division in the War Department General Staff. At that time the shipping shortage already was felt and a more critical situation was foreseen. During the months preceding entry of the United States into the war, this section developed data and techniques which were of great service during the difficult days following Pearl Harbor. Eventually it became the Planning Division in the Office of the Chief of Transportation, Army Service Forces. It prepared, as frequently as circumstances required, studies covering future shipping requirements, the volume of shipping likely to be available, and the capability of that shipping to effect movements of men and matériel under various plans for their utilization.[78] Its studies covered also the capabilities of the inland transportation systems and the ports of the United States to handle the projected traffic.

The Chief of Transportation's Planning Division collaborated extensively with the planning staff in Army Service Forces headquarters, and one or more of the division's members accompanied the War Department representatives to the meetings of the heads of Allied governments to assist them in dealing with the ubiquitous transportation problem. The inseparability of transportation and supply matters, and the need for continuous co-ordination, led to a proposal in the fall of 1943 to absorb the Chief of Transportation's Planning Division into the Army Service Forces headquarters staff. General Gross vigorously opposed the suggestion on the ground that it would weaken a vital working relationship which had been built up between himself, his Director of Operations, his several operating divisions, and his planning organization. His opposition was successful, for although the transfer was ordered, the order was rescinded before actual transfer and the necessary changes in procedures had been effected.[79]

The planning for ocean transportation involved many factors which were subject to fluctuation, and a change affecting one factor might, and frequently did, necessitate complete revision of earlier calculations. The introduction of a new military undertaking calling for a goodly number of ships necessitated a revision in the allocation of vessels to other projects. Estimates of the future output of American shipyards were important factors in determining what oversea operations reasonably could be projected, and any failure to realize those estimates had a disturbing effect. Possible variation in the rate of ship losses was taken into account, and changes in the tactics and locations of enemy submarines were carefully watched. When sinkings off the coast of Norway made the northern route to the USSR untenable, that route was abandoned temporarily and more lend-lease supplies for the Soviet Union were routed through Persian Gulf ports. When it became apparent that the shorter route through the Mediterranean would become available for American and British movements to the

[78] For activities of Plng Div see its Annual Rpt, FY 1945; Memo, Plng Div for Exec OCT, 3 Oct 45, sub: Accomplishments and Handicaps; Hist Summary, by Plng Div, 26 Jun 46. All in OCT HB Plng Div Gen.

[79] ASF Adm Memos S–72, 21 Oct 43, and S–85, 10 Nov 43, OCT HB Plng Div Gen.

OVERSEA PORTS. *The Army-operated port of Khorramshahr, Iran (top). First large vessel to dock at Naha after the invasion of Okinawa (bottom). The capacity of ports to discharge and forward cargo had to be carefully calculated in planning military operations.*

Middle and Far East, full advantage of the resultant saving in ships was taken in planning future operations. The same was true when the possibility of moving lend-lease supplies to the Soviet Union through Black Sea ports rather than the Persian Gulf became reasonably certain. No transportation policy or program was considered inflexible; it was always subject to adjustment in the light of new conditions.

It was part of the planning task to estimate the capacities of oversea ports to discharge cargo and clear it to dumps and depots. This was an especially difficult task since the estimates so frequently had to take into account the extent of damage and the amount of rehabilitation work likely to be required at ports captured from the enemy, and also the uncertainties of discharge operations at beaches and in primitive harbors. Similar estimates had to be made as to the capabilities of railways, highways, and inland waterways in the areas to be invaded and the amount of reconstruction and new construction likely to be required in the establishment of adequate lines of communication in those areas. The operating divisions in the Office of the Chief of Transportation, which were concerned with the respective types of transportation, conducted initial research into these questions, utilizing whatever sources of information could be tapped, in or out of the War Department. This information was co-ordinated and adapted to the use of the Chief of Transportation by his Planning Division.

The progress of military operations in the principal theaters was followed closely by the Planning Division, and revised estimates of the capabilities of lines of communication were made from time to time. Such studies threw light not only on the quantities of supplies which the Transportation Corps would be requested to move to the theaters, but also on the ability of the theaters to properly handle the supplies which they had requisitioned and their ability to discharge vessels promptly and return them to their home ports. The studies also forecast the future requirements of the theaters for transportation troop units and transportation equipment, for the procurement of which the Chief of Transportation was responsible—a matter concerning which the Planning Division had a co-ordinating responsibility that called for close collaboration with the Director of Military Training and the Director of Supply in the Office of the Chief of Transportation.

Long-range planning for transportation in the zone of interior proceeded less auspiciously than planning for ocean transportation and for the lines of communication in oversea theaters. This was due partly to differing opinions regarding the extent of the need for additional domestic transportation facilities and partly to disagreement as to whether the government or industry should assume the cost.[80] After the United States had entered the war the production of ships, tanks, aircraft, and other strictly military items made such heavy demands on the supplies of steel and other strategic materials that only limited amounts of these commodities could be made available for the manufacture of equipment for domestic carriers. Planning for zone of interior transportation, therefore, was directed toward the judicious utilization of the limited materials that were available and the efficient employment of existing transportation resources, including both equipment and manpower. The Chief of Transportation took an active interest in all these matters, and his planning and operating

[80] Fuller discussion will be found in Ch. IX.

staffs co-operated closely with the other federal agencies concerned, as well as with the several branches of the transportation industry.

Relative Advantages of the Contending Powers

Since transportation is so vital an element in a nation's ability to wage modern war, an appraisal of the relative transportation advantages of the Allies and the Axis Powers is of basic importance. From the standpoint of geography the advantage was strongly with the Axis. Germany and Japan had shorter lines of communication, which meant that they required less transportation equipment and had less military manpower and matériel tied up in the "pipeline" from the zone of interior to the combat areas. Germany also had inside lines of communication radiating from the homeland to the combat areas, a situation which afforded greater flexibility in the redeployment of troops and supplies. The fact that Germany's lines of communication were mostly overland meant that her war potential was less affected by the hazards which beset ocean shipping and that her army could employ short-range transport planes more extensively in its logistic operations. These natural transportation advantages which the Axis Powers enjoyed in the beginning had to be offset by the Allies before the war could be won.

Germany's transportation systems had been carefully planned with a view to their utility in time of war. The railways were well laid out and highly efficient. After Hitler's accession to power a system of superhighways had been constructed which enabled mechanized forces and supplies to be moved north, east, south, or west with remarkable speed.[81] It was reported from various sources that during the 1933–38 period the German railways were neglected in favor of highway development, and consequently were under a handicap when war came.[82] Thereafter, railroad equipment had a high priority in the production program, and as late as January 1944 United States military intelligence reports indicated that the rail lines were functioning effectively and were being maintained well.[83] Their services were largely at the disposal of the military establishment, since civilian use was severely curtailed.

It is clear, on the other hand, that the German transportation systems at all times had a very narrow margin of safety. Both immediately before and during the war the production of railway and motor equipment was limited by the over-all scarcity of materials and the heavy requirements for strictly military items. While the Reich acquired a considerable number of locomotives, cars, and trucks in the conquest of western Europe, her needs on the eastern front were large and her losses there exceedingly heavy.[84] The lack of readily accessible crude petroleum was a serious handi-

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[81] See Charles B. Quattlebaum, "Military Highways," *Military Affairs* (Fall 1944), p. 227.

[82] Ltr, AAR to Gen Gross, 11 Aug 42, and attached digest of rpts, OCT HB Gross Rail AAR Equip Program.

[83] Rpt 86, OSS, 20 Oct 42, sub: The Locomotive Position in Axis Dominated Europe, OCT 453 RR Requirements; Col Curtis H. Nance, War Report, Min of Army-Navy Conf of Industry, Labor, and other Leaders, Los Angeles, 7–8 Jan 44, p. 21, OCT HB Topic Logistics Gen; U.S. Strategic Bombing Survey, Trans Div Rpt, *The Effects of Strategic Bombing on German Transportation*, 20 Nov 45, pp. 1, 2.

[84] Regarding German transportation problems on eastern front and in Balkans, see study, Advantages and Defects of European Transport Networks, German Air Hist Br, 30 Oct 44, Translation VII/IV, OCMH.

RAILROAD YARDS *at St. Lô, France (top) and Battipaglia, Italy (bottom) show the cumulative effects of Allied bombing and German demolition. Aerial bombardment of railroads in Europe seriously disrupted enemy military and industrial transportation.*

cap, and the reserves of both natural and synthetic oil fuels and lubricants were very small from the outset.[85]

Despite the strain which war on several fronts imposed on the transportation systems of Germany, there is no basis for stating that her lines of communication in western Europe would have failed from inherent weaknesses or internal causes. Their failure in the late stages of the war resulted from the terrific aerial bombardment to which transportation and its supporting industries were subjected. During the latter half of 1944 and the early part of 1945, Allied bombers subjected Continental railways, highways, waterways, oil wells and refineries, synthetic oil and rubber plants, railway equipment and motor vehicle manufacturing plants, steel mills, and ball bearing works to a merciless pounding, which in the end largely immobilized transportation and in consequence seriously affected all branches of industrial activity.[86] Up to the spring of 1944, when the heavy bombing of Continental transportation targets got under way, the railroads had been able to meet the demands placed upon them, but by the first week of March 1945 (the last week of record) carloadings had dropped to less than one-fourth of what they had been a year earlier. As the result of air raids on truck manufacturing plants, the output of vehicles in March 1945 was only 23 percent of the monthly average during the first six months of 1944, and the decline of fuel supplies which took place concurrently immobilized much of the existing motor equipment.[87] The bombing and strafing of trains, marshaling yards, and motor convoys, in addition to taking a heavy toll of the equipment directly attacked, slowed down all transportation operations.[88]

Water transportation played a useful but subordinate role in the German war effort. The highly developed inland waterway systems of central and eastern Europe and the coastwise services gave appreciable relief to the hard-pressed railroads. During the period when Germany controlled the French ports and used them as submarine bases, her merchant vessels were able to run the Allied blockade with considerable freedom, but as the Allied naval and air forces grew stronger the risk became greater, and after Germany lost control of the western French ports her operations on the long sea routes virtually ceased. German shipping on the short routes in the Baltic and North Seas, which brought valuable imports, particularly iron ore, from the Scandinavian Peninsula, also felt the increasing strength of Allied air and sea power. After the Allied success in North

[85] U.S. Strategic Bombing Survey, *Oil Division Final Report,* January 1947, p. 1.

[86] Eisenhower, *Crusade in Europe,* pp. 384–85, describes Operation CLARION, executed 22 Feb 45, as "one gigantic blow against the transportation system of Germany, with specific targets specially selected so as to occasion the greatest possible damage and the maximum amount of delay in their repair"; 9,000 aircraft from bases in England, France, Italy, Belgium, and Holland participated. See U.S. Strategic Bombing Survey, Interv 51, 25 Jun 45, p. 5, Interv 55, 27 Jun 45, p. 21, and Interv 62, 29 Jun 45, p. 10, for testimony of Generalfeldmarschalls Gerd Von Rundstedt and Keitel, and Generaloberst Alfred Jodl, respectively, which indicate that transportation on western front was seriously affected from summer of 1944 and had almost ceased to function in spring of 1945.

[87] U.S. Strategic Bombing Survey, *Over-all Report (European War),* September 30, 1945, pp. 39–45, 59–65, summarizes effect of air attack on oil supply, transportation, and the motor vehicle industry.

[88] Allied Forces Supreme Headquarters, *Eisenhower's Own Story of the War* (New York, 1946), p. 94. The effect of transportation disruption on German military operations in Normandy is described in *Omaha Beachhead,* Hist Div SSUSA, American Forces in Action Series (Washington, 1945), p. 149.

Africa, German shipping operations in the Mediterranean were on a rapidly diminishing scale.[89]

The transportation situation of Japan was exactly opposite to that of Germany. Her principal sources of raw materials were overseas, and in consequence her war potential was dependent heavily on her merchant marine. After her entry into the war, Japan was confronted with the dual task of maintaining a great circle of defense bases around the homeland and securing new sources of raw materials to supplement those already acquired on the Asiatic mainland. This task would have been an enormous one, considering the small size of Japan's merchant marine and her limited shipbuilding capacity, even under more propitious circumstances. As the United States rapidly increased her fleets of aircraft and naval vessels and extended her naval and air bases into the western Pacific, Japanese shipping capacity was reduced to the point where it was quite inadequate for the performance of the task with which it was charged.

The position of Japanese transportation toward the close of hostilities was clearly defined by Premier Naruhiko Higashi-Kuni in an address to the Japanese Diet on 5 September 1945.[90] He stated that, in addition to the shipping capacity having been reduced about 75 percent by sinkings, the efficiency of operations had been curtailed markedly by the scarcity of fuel and by enemy interference. Because of bombings and the depreciation of rolling stock, the carrying capacity of the railways in mid-1945 was less than half that of the preceding year. The supply of liquid fuel had been reduced to what could be obtained in Japan, Manchuria, and China. The reduction in coal output and the difficulty of transporting the product had caused a general decline in industrial activity. Steel production had been cut to one-fourth of prewar output, so that little was available for building new ships. Under the circumstances it became barely possible to provide the Japanese forces in the various parts of "Greater East Asia" with adequate equipment.[91] On the other hand, the Japanese Premier pointed out, the capacity of the Allied nations for the supply and replenishment of their forces was always on the increase because of their vast resources and industrial power.

To recapitulate: Germany, through miscalculations or strategic blunders which involved her in a long multifront war, found her vital land transportation systems subject to disruption from the air to an extent which far exceeded her anticipation. Japan, with her multitude of oversea garrisons and supply sources, saw her essential merchant marine devastated by attacks of unforeseen intensity from air and sea. During the later stages of the war the Allied strategists gave transportation targets a high priority, and the leaders of the defeated powers testified to the effectiveness of that strategy. The Allies' ability to produce unprecedented

[89] For discussion of Allied methods of limiting German imports, other than by attacks on shipping, see John V. Lovitt, "The Allied Blockade," *Department of State Bulletin,* November 19, 1944.

[90] Transcription published in *The New York Times,* September 6, 1945.

[91] U.S. Strategic Bombing Survey, *Summary Report (Pacific War),* July 1, 1946, states that on 1 Mar 45 the Japanese decided not to send further supplies to their ground forces outside the home islands (p. 8); Japanese merchant fleet (vessels of 500 gross tons or more) aggregated about 6,000,000 tons gross in Dec 41, had accretions of about 4,000,000 tons during the war, and suffered losses through sinking or serious damage totaling 8,900,000 tons (p. 11); Japanese railway system had not been subjected to widespread attack but damage to local facilities had seriously disrupted movement of supplies within and between cities (p. 17).

numbers of aircraft, naval vessels, and merchant ships, in addition to other necessary war matériel, enabled them to carry the fighting to the German and Japanese homelands over widely extended lines of communication and at the same time seriously reduce the efficiency of the foe's communications. The Allies' ability to outproduce Axis industry by a large margin, plus their more accessible and abundant resources of petroleum and other raw materials, enabled them eventually to more than offset the transportation advantage which their opponents had held at the beginning of the war by reason of geography.[92] This tremendous productive power completely upset the conventional theory that the enemy would get tougher as his lines of communication became shorter and the Allied lines became longer.[93]

[92] For comparison of U.S. War production with world production, see *War Production in 1944*, rpt of WPB Chm (Washington, 1945), p. 22.

[93] See Maj George Fielding Eliot, "The Enemy Will Get Tougher and Tougher," *Look*, February 9, 1943.

CHAPTER II

Antecedents of the Transportation Corps

When in December 1941 the United States was plunged into a global war with unprecedented transportation implications, the Army's plan for dealing with transportation matters was essentially what it had been in peacetime. There had been some expansion of personnel and facilities during the prewar emergency, but the organizational set-up was basically the same as that which had existed during the 1930's. There was a lack of integration and some disagreement as to where certain responsibilities rested. A long step toward correction of this weakness was taken in March 1942 when a transportation service under a chief of transportation was established. Further progress was made when the Transportation Corps was created in July 1942, and again when the corps' responsibilities were considerably expanded a few months later. Nevertheless, some transportation responsibilities remained outside the purview of the corps throughout the period of hostilities. In certain respects, therefore, the experience of World War II was a repetition of the experience of World War I.

It would be misleading, however, to imply that Army transportation in World War II did not benefit from the experience of the previous conflict. In many ways it did. During the years 1940–41, when the United States was drifting nearer and nearer to a state of open belligerency, some of the lessons of 1917–18 were recalled and applied to the solution of problems then arising and to preparations for eventualities. After Pearl Harbor knowledge of the adjustments which had become necessary during the earlier war furnished a guide for the establishment of new organizations and procedures, and a workable plan was evolved much more quickly. On the other hand, the difficulty of making sweeping adjustments while working under wartime pressure prevented certain changes which would have been beneficial, and some of the rearrangements that were made fell short of the ideal. In order that the relationship between the two wars with regard to transportation administration may be understood more readily, a brief review of major developments during the first world conflict is presented.

Army Transportation in World War I

The story of Army transportation in the first world war is an involved one, for the machinery of administration underwent an almost ceaseless evolution. Neither in the zone of interior nor with the American Expeditionary Forces in France was a satisfactory and stable form of organization achieved until after the cessation of hostilities. There was, moreover, a lack of coordination between the Army transportation organization in the United States and

that in France, so that each developed along independent lines, under the influence of differing conditions and different personalities.

When the United States joined the Allies in April 1917, transportation for the War Department was basically the responsibility of The Quartermaster General.[1] He had supervision of transportation by common carrier between posts, camps, and stations within the United States, and of shipments overseas by commercial vessels. He supervised the operation and maintenance of the Army Transport Service, which included the Army's ports of embarkation where troops and military supplies moving overseas were transshipped, and a fleet of seven Army transports. While the Office of the Quartermaster General performed these supervisory functions, the actual control of transportation operations was largely decentralized. Shipments by inland carriers were made by local quartermasters or by the shipping officers of other Army supply bureaus, who did not consult the Land Transportation Branch in The Quartermaster General's Transportation Division except when the movements were so large as to create problems which they individually could not manage. Oversea shipments were handled by Army Transport Service superintendents at the principal ports, and at the smaller ports, by local depot quartermasters, who acted under the general guidance of the Water Transportation Branch of the Transportation Division but enjoyed a large degree of independence. The operation of Army port facilities and Army transports was the responsibility of the Army Transport Service superintendents, acting within the general policies developed by the Water Transportation Branch.

Before the war had progressed many months it became evident that stronger organizations would be required at the principal ports to transship large numbers of troops and large quantities of freight, and to perform other related functions such as staging troops, storing supplies, and operating shore facilities and floating equipment. The confusion which had developed in connection with the embarkation of troops to Cuba in the Spanish-American War was recalled and the necessity of avoiding a repetition of that unhappy situation was recognized. Accordingly, early in July 1917 primary ports of embarkation were established at New York (Hoboken) and Newport News, each under the command of a general officer. The Army Transport Service superintendents at those ports were placed under the jurisdiction of the port commanders. Also, the authority of the Water Transportation Branch in the Office of the Quartermaster General regarding ship operations "was somewhat subordinate to that of the commanding generals of the ports." [2]

During the early summer of 1917 the unregulated movement of troops and supplies into the port areas greatly added to the problems of the port commanders. Need for co-ordination between the shippers and the ports and among the ports themselves became urgent. This situation led to the estab-

[1] Statements regarding transportation within the U.S. and ocean transportation, except as otherwise indicated, are based on *Report of the Chief of Staff, U. S. Army, 1919,* pp. 15–23, 111–19, 147–67, 195–96, 208–12.

[2] *Ibid.,* p. 117. The ports of embarkation at New York and Newport News handled the bulk of the troops and supplies moved to Europe, but other Atlantic and Gulf ports were used to a lesser extent. See *Report of the Chief of Transportation Service, 1919,* pp. 32–34. San Francisco Port of Embarkation handled the relatively small movements to Hawaii, Alaska, and the Philippines.

lishment of an Embarkation Service in the Office of the Chief of Staff in August. In addition to responsibility for regulating the movement of traffic to the ports and its transshipment overseas, the Embarkation Service was given supervision of the operation of the Army's port facilities and the operation and assignment of Army transports. The Quartermaster General's Water Transportation Branch became subordinate to this new unit in the Office of the Chief of Staff.

As a first step in the effort to effectively control the flow of supplies to the ports of embarkation, the shipping officers of the Army's supply bureaus were required, beginning in September 1917, to obtain transportation "releases" from the port commanders before starting such shipments. In November 1917 the plan was changed, and thereafter releases were issued by the Embarkation Service, which was in a better position to understand the over-all rail transportation situation and the relative fluidity of the several ports. This control failed, however, because there was no machinery for holding at points of origin shipments which had not been released, and in the absence of such machinery the release requirement frequently was disregarded by shipping officers.

In a further effort to improve port operations and the utilization of shipping, the Secretary of War established the War Board of the Port of New York in November 1917. This board, which functioned under the guidance of an experienced shipping man who served as civilian executive officer, was vested with authority to make regulations for the operation of the facilities of the port, to determine priorities in the use of such facilities, and to do whatever else might be considered necessary to assure the prompt dispatch of War Department traffic.[3] But the shipping problem involved much more than the operation of a single port. Because of the growing military requirements, other ports were being used increasingly. The critical shortage of bottoms necessitated a judicious withdrawal of ships from trade routes and a greater co-ordination between the United States and the Allies in regard to the employment of vessels. Accordingly, a Shipping Control Committee was appointed in February 1918, by concurrent action of the Secretary of War and the United States Shipping Board, with broad authority over all merchant shipping operations of the United States. This committee, which consisted of three civilians, one British and two American, was responsible for the allocation of shipping to the various uses, the distribution of traffic among the several ports, the efficient utilization of ships and port facilities, and the exchange of ships and shipping space between allied nations. Insofar as the committee's activities related to the port operations and vessels of the Army, it worked in close co-ordination with the Embarkation Service in the Office of the Chief of Staff and the Army Transport Service superintendents at the ports.[4]

The need for greater co-operation among the American railroads was apparent before the United States entered World War I, and steps in that direction were initiated by committees established by the carriers. Immediately after the declaration of war a Railway War Board was appointed by the American Railway Association. Although composed principally of railway executives,

[3] *Report of the Chief of Staff, U.S. Army, 1918*, pp. 7, 8.

[4] See Ltr, SW to Shipping Contl Com, 7 Feb 18, and proceedings of U.S. Shipping Board, 11 Feb 18, OCT HB Topic Traf Contl WW I; see also WD GO 14, 9 Feb 18.

the board included representatives of the six territorial departments of the Army, and agents of the board were stationed at each territorial department headquarters and at each mobilization camp and other important military station. The board undertook to supervise the operations of the railroads insofar as military movements were concerned, to co-ordinate carriers operating in the same territories, and to regulate car supply. With the approval of the War Department, the board issued instructions to the railroads regarding methods of handling troops and supplies. A subcommittee was appointed by the board to deal especially with troop transportation and to co-operate with the War Department in establishing routes and expediting movements.[5]

Although the Railway War Board performed a valuable service, the steadily increasing production of war matériel by American industry and the unregulated flow of freight to the ports brought greater and greater traffic congestion and resulted in an increasing number of freight cars being immobilized because they could not be unloaded. In December 1917 the United States Railroad Administration was established and the federal government assumed control of the carriers in an effort to improve the transportation situation throughout the country. Soon thereafter the War Department created an Inland Transportation Division in the Office of the Chief of Staff, the director of which had jurisdiction over all inland transportation of Army supplies and troops, and served as chairman of a War Department Priorities Committee which was established concurrently. Around these new organizations a more effective system for controlling the movement of traffic was built. Beginning 1 March 1918, shippers of War Department freight, whether for domestic or oversea destinations, were required to obtain releases from the Inland Transportation Division in addition to the releases obtained from the Embarkation Service for oversea shipments, and the freight agents of the carriers were instructed by the Railroad Administration not to accept shipments until such releases had been issued. From that date the traffic situation began to improve.[6]

A broad influence over the flow of traffic to the ports was exercised by the Exports Control Committee, which was established in June 1918. The committee's membership included representatives of the Army, the Navy, the Railroad Administration, the Shipping Control Committee, and the British Ministry of Shipping. It met weekly, and on the basis of information assembled by its staff it undertook to determine the amount of military freight to be exported, the most advantageous routing for such freight, the amount of other essential export traffic to be handled, and the total amount of traffic to be passed through each port. It effected a close liaison with all government agencies utilizing inland and ocean transportation, and with the railroads. The determinations of the Exports Control Committee were given effect by the several agencies from which its membership was drawn.[7]

The establishment of first the Embarkation Service and then the Inland Transportation Division in the Office of the Chief of Staff, with the functions indicated above, meant that the Water Transportation

[5] Crowell and Wilson, *The Road to France*, pp. 45-48.

[6] The passing of the unusually severe weather which characterized the winter of 1917-18 contributed to this improvement.

[7] *Exports Control Committee, Annual Report, 1918*, OCT HB Topic Traf Contl WW I.

Branch and the Inland Transportation Branch in the Office of the Quartermaster General were relieved of many of their responsibilities. By June 1918 the absorption of transportation functions by the General Staff had gone so far that The Quartermaster General's Transportation Division was ordered abolished. At that time the Embarkation Service and the Inland Traffic Service (new name for the Inland Transportation Division) functioned as subdivisions of the Purchase, Storage and Traffic Division of the General Staff.[8] They continued in that relationship until March 1919, four months after the Armistice, when they were consolidated into a single transportation organization, designated the Transportation Service, which was to function outside the General Staff but under its broad supervision. This development was in line with the policy then in effect to divest the General Staff of the operating responsibilities which it had assumed during the war.

Integration of transportation activities at field installations was effected in April 1919. At that time each territorial department, procurement zone, post, camp, and station was required to consolidate under a single transportation officer all transportation activities except those pertaining to the Motor Transport Corps, which was concerned primarily with organic motor equipment and personnel. Eventually such a transportation officer was detailed by the commander of each military station and each tactical unit (division or larger). The duties of this officer were those imposed upon the Transportation Service insofar as they applied to his particular station, and he was directed to be guided by regulations promulgated by the Chief of Transportation Service. The transportation officers at stations which were under the jurisdiction of Army departments were responsible directly to the departmental commanders. The transportation officers at stations exempted from the jurisdiction of the departmental commanders, except those at ports of embarkation, were supervised by zone transportation officers designated by the Chief of Transportation Service. The ports of embarkation continued to be responsible directly to the Chief of Transportation Service.[9]

During the latter part of World War I the Navy operated all of the troop transports and many of the cargo vessels which were in the service of the Army. At the outbreak of hostilities the Army had planned to operate such vessels with civilian crews as was its practice in peacetime; but the fact that the Navy was responsible for organizing and protecting convoys, together with the difficulty of obtaining civilian crews because of the limited amount of merchant shipping under the United States flag at that time, soon necessitated a reconsideration of the question. In July 1917 an agreement between the Army and the Navy placed all troopships under the operation of the latter. This arrangement was extended later to cover animal transports and cargo vessels, with certain exceptions. Some of the excepted vessels were operated under the control of the Army Embarkation Service and

[8] The Purchase, Storage and Traffic Division was the end product of a series of reorganizations in the General Staff which resulted in more and more responsibility being taken over from the supply bureaus. In defense of this development the Chief of Staff said: "Under the existing conditions . . . no other alternative existed if the military program as a whole were to be carried out . . ." *Report of the Chief of Staff, U.S. Army, 1919,* p. 23.

[9] *Report of the Chief of Transportation Service, 1920,* pp. 5–7. Regarding establishment of MTC in August 1918, see *Report of the Chief of Staff, U.S. Army, 1919,* p. 191.

some under the control of the U.S. Shipping Board. Early in 1918 the Navy and the Shipping Board entered into an agreement which further enlarged the Navy's operating responsibilities. On 11 November 1918 the Navy's Cruiser and Transport Force included 42 troopships and 25 cruisers and battleships (the latter carrying troops in addition to serving as escorts), and the Navy's Overseas Transportation Service was operating or had taken over for operation 453 cargo vessels, of which 213 were engaged exclusively in carrying supplies to the American Expeditionary Forces in France.[10]

With the American Expeditionary Forces, as in the zone of interior, the handling of transportation matters suffered in the beginning from an almost total lack of advance planning, and then from the numerous organizational and procedural adjustments which were made while war was in progress. When American troops and supplies began arriving in France, the Quartermaster Corps took charge of Army Transport Service operations at French ports. Procurement, operation, and maintenance of motor transport were distributed among the several supply services, the Quartermaster Corps having the larger responsibility. Railway construction, operation, and maintenance were placed in charge of the Chief Engineer by GHQ, American Expeditionary Forces. The latter arrangement was considered a temporary expedient to meet the pressing need while a thorough study of the general supply and transportation problem was being made.[11]

From the summer of 1917 to the end of hostilities the machinery for the administration of transportation in the American Expeditionary Forces went through a series of rapid changes, some of which were of major proportions. By the end of 1917 railway operations and marine operations had been brought under the control of a Transportation Service. Railway construction, and to a considerable extent railway maintenance, remained in the hands of the Chief Engineer. On 12 November 1918, the day after the Armistice, the Transportation Service became the Transportation Corps, with slightly increased authority in the rail field. Neither the Transportation Service nor the Transportation Corps was responsible for motor transport, which was placed for a time under the control of the Quartermaster Corps and then under the newly created Motor Transport Corps.[12] All of these activities were subordinate to a general supply service, which at first was known as Services of the Rear and later as Services of Supply.

Aside from the lack of advance planning and the confusion attendant upon the many changes which preceded the attainment of a satisfactory organization, numerous other problems beset the Army Transportation Service in France. There were misunderstandings with the Quartermaster Corps and the Corps of Engineers, the organizations

[10] Crowell and Wilson, *The Road to France*, XXVIII, XXX, App. F; Vice Adm Albert Gleaves, USN, *History of the Transport Service* (New York, 1921), p. 27. On 1 Nov 18 the transatlantic fleet serving the Army included 512 vessels aggregating 3,251,000 DWT, and the cross-Channel fleet numbered 104 vessels of 311,000 DWT, according to *Report of the Chief of Staff, U.S. Army, 1919*, p. 156.

[11] Statements regarding transportation arrangements in the AEF are based largely upon Monograph 7, Organization of the Services of Supply, Army Expeditionary Forces, HB, WPDGS, Washington, Jun 21; a more detailed and personal account is given by Brig Gen Johnson Hagood, CofS SOS AEF, in *The Services of Supply* (Boston, 1927).

[12] Regarding motor transport see *Final Report of General John J. Pershing* (Washington, 1919), p. 74, and Hagood, *The Services of Supply*, p. 343.

from which the new service had drawn its principal functions. Railroad officials with the Transportation Service found it unsatisfactory to have railroad construction work under the control of a separate agency, the Office of the Chief Engineer.[13] The difficulty of getting trained personnel from the United States was great, and despite an authorized strength of 6,000 officers and 200,000 enlisted men to serve an Army which might reach 4,000,000, the actual strength of the Transportation Service at the time of the Armistice was only 1,810 officers and 46,976 enlisted men.[14] Differences in language and technical terms complicated the problem of co-operation with French transportation personnel. Differences between American and French railway equipment and methods gave rise to delays and accidents. The relationship of the central transportation organization to the commanders of base and intermediate sections and to the regulating and railhead officers in the advance section was never satisfactorily worked out, and the complete jurisdiction of local commanders over train and car movements within their respective jurisdictions made the task of over-all management extremely difficult.[15]

From the foregoing review it is apparent that although considerable progress was made during and immediately after the war toward bringing the various types of Army transportation under the control of a single office, complete integration was not achieved either in the zone of interior or with the American Expeditionary Forces in France. In his 1919 report to the Secretary of War, Brig. Gen. Frank T. Hines, Chief of Transportation Service, emphasized the advantages of such integration and recommended the establishment of a transportation corps "with complete jurisdiction over all matters of transportation for all branches of the War Department." [16] This recommendation was only partially heeded, for a plan "for the reorganization of the Army in the light of the experience that has crystallized out of the war," submitted to the Secretary of War by the Chief of Staff, provided for both a transportation corps and a motor transport corps.[17]

Bills to carry this plan into effect, including the transportation features, were introduced in the House of Representatives and the Senate during August 1919. The hearings on these bills, however, disclosed a lack of unanimity regarding Army transportation, even among representatives of the War Department, and neither was reported out of committee. A further measure, which included provision for a transportation corps with jurisdiction over all forms of transport, was introduced in the House of Representatives, but it was not given a hearing and died in committee. These measures having failed, a bill was introduced in February 1920 which provided for the return of transportation to the control of The Quartermaster General. Debate on this

[13] William J. Wilgus, *Transporting the AEF in Western Europe, 1917–1919* (New York, 1931), pp. 144, 151, 160. Colonel Wilgus, experienced American railway executive, served in France as Director of Military Railways and as deputy to Brig. Gen. W. W. Atterbury, Director General of Transportation. He wrote in detail regarding his experiences and expressed himself feelingly about the unpreparedness of the AEF for the transportation task which confronted it and the hardships resulting from the eight reorganizations which were necessary.

[14] Organization of the Services of Supply, American Expeditionary Forces, p. 89; cf. Wilgus, *Transporting the AEF,* p. 201.

[15] See Wilgus, *Transporting the AEF,* pp. 549–60.

[16] *Report of the Chief of Transportation Service, 1919,* p. 186.

[17] *Report of the Chief of Staff, U.S. Army, 1919,* pp. 248, 252.

measure disclosed a preponderance of opinion in favor of such an arrangement, economy being one of the chief arguments. Attempts to amend the bill to provide for a transportation corps failed.[18]

Accordingly, the Army Reorganization Act of 1920 placed transportation for the War Department, except military railways, under the jurisdiction of The Quartermaster General.[19] The War Department directive to implement this law stated, "the Transportation Service shall be organized and operated as a separate service of the Quartermaster Corps and shall be charged with transportation of the Army by land and water, including transportation of troops and supplies by mechanical or animal means, and with the furnishing of means of transportation of all classes and kinds required by the Army." [20] The Transportation Service, as established within the Quartermaster Corps, included divisions to deal respectively with animal transport, motor transport, rail transport, water transport, and war planning.[21]

Thus it appears that although World War I had demonstrated, at least to those directly concerned, the need for an independent and integrated transportation service during hostilities, it had not made clear, certainly not to Congress, the advisability of maintaining such a service during peacetime as a measure of preparedness. Instead of establishing transportation as an independent service, the Army Reorganization Act of 1920 again made it one of the several responsibilities of The Quartermaster General. Instead of completely integrating the control of Army transportation under one head, it made the construction, maintenance, and operation of military railways a responsibility of the Chief of Engineers, as it had been before the war.[22] On the other hand, motor transport was brought into the Transportation Service, and the need for advance planning for war was recognized in the organization of the Transportation Service.

Developments Preceding Pearl Harbor

Not only did World War I fail to bring about the independence and integration of Army transportation which the Chief of Transportation Service had hoped for, but much of the gain which had been crystallized in the organization which followed the passage of the Army Reorganization Act of 1920 was lost between the wars.[23] The optimism which prevailed regarding the continuance of peace, together with the limited appropriations forthcoming from Congress, had this effect. Operations became routine and planning for war lost its urgency. The Transportation Service gave way to a Transportation Division in the Office of the Quartermaster General. On the eve of World War II that division included a Commercial Traffic Branch which was responsible for controlling and co-ordinating all War Department traffic by commercial carriers; a Water Transport Branch which was responsible for traffic

[18] See OCT HB Monograph 4, pp. 16–22, for discussion of these measures and hearings.

[19] PL 242, 4 Jun 20.

[20] WD GO 42, 14 Jul 20.

[21] OQMG Cir 11, 28 Jul 20; OQMG Office Order 119, 30 Aug 21.

[22] See Benedict Crowell and Robert F. Wilson, *The Armies of Industry* (New Haven, 1921), XXVI; AR 100–50, 6 Jun 23.

[23] For review of 1920–39 developments, see OCT HB Monograph 4, pp. 24–31; Monograph 5, pp. 22–26; Monograph 6, pp. 15–52. Of special interest in the latter is discussion of relations with Federal Traffic Board and Coordinator for Traffic (pp. 18–20, 43–46), and transportation provisions of the several industrial mobilization plans (pp. 33–38).

PEACETIME PORTS OF EMBARKATION. *The pier and warehouse facilities at Fort Mason, San Francisco (top) and the Brooklyn Army Base, New York (bottom) were adequate for Army shipping operations between the wars.*

by Army transports, the scheduling of the transports, supervision of the operation of transports and ports of embarkation, and the procurement and assignment of transports and harbor boats; and a Motor Transport Branch which was responsible for the development, design, procurement, maintenance, storage, and issue of wheeled motor vehicles.[24] The Quartermaster General also was responsible for the organization and training of troop units for the operation of ports and motor vehicles.

The outbreak of hostilities in Europe and the launching of a rearmament program in the United States impelled numerous changes in this organization. In view of the tremendous increase in the motor vehicle procurement program, the Motor Transport Branch was withdrawn from the Transportation Division and set up as a co-ordinate division in July 1940.[25] Otherwise, the developments in the Transportation Division were in the nature of expansion or in the interest of efficiency. The Commercial Traffic Branch relinquished to the Water Transport Branch control over the booking of passengers and freight on commercial vessels, in order that all dealings with the steamship lines might be concentrated in one office. Because of the growing number of Army transports and the increasing demand for harbor boats, a Marine Design, Construction, and Procurement Branch was established to perform functions which previously had been assigned to the Water Transport Branch. A Traffic Control Branch was set up to co-ordinate and expedite land and water movements and to plan for such further control of shipments as might become necessary. A Research and Review Branch was instituted to handle legal and intelligence matters. An Administrative Branch was introduced to relieve the other branches of certain responsibilities relating to personnel, finance, statistics, and planning.[26] Within the branches, new sections and units were created to deal more effectively with the enlarged responsibilities and the more complex problems.[27] In January 1941 The Quartermaster General appointed a Transportation Advisory Group, consisting of leading executives from the fields of steamship, railway, motor truck, motor bus, inland waterway, and air transportation, and of warehousing, to advise on problems confronting his Transportation Division and to submit suggestions for the improvement of its operations.[28]

During the 1939–41 period the Transportation Division functioned under a succession of chiefs, namely, Brig. Gen. Richard H. Jordan, who served until July 1940; Col. Douglas C. Cordiner, who served from August 1940 to March 1941; and Col. (later Brig. Gen.) Theodore H. Dillon, who served from March 1941 until transportation was removed from the control of The Quartermaster General a year later.

Staff supervision over transportation was exercised during this period by the Supply Division (G–4) of the War Department

[24] OQMG Office Order 4, 7 Jan 37.

[25] OQMG Office Order 49, 26 Jul 40. Design and procurement of motor vehicles was transferred from QMC to OD by WD Cir 245, Sec. IV, 25 Jul 42. Staff and technical responsibilities for truck operating troop units remained with QMC until transferred to TC by WD GO 77, 24 Jul 46.

[26] The organization set forth in Trans Div Office Memo 45, 1 Jul 41, remained in effect without substantial change to Mar 42. OCT HB OQMG Trans Div Gen.

[27] See OCT HB Monograph 5, pp. 27–36, and Monograph 6, pp. 71–80.

[28] See remarks of QMG in minutes of initial meeting of the group, 9 Jan 41, OCT HB OQMG Trans Adv Group; OCT HB Monograph 1 reviews work of group.

General Staff. At the beginning of the prewar emergency this supervision was relatively light, and was handled by one officer, Maj. Frank S. Ross, who with a secretary constituted the Transportation Section of the Supply and Transportation Branch, G–4. Since Ross's experience was mainly with water and rail transportation, in October 1940 an expert in motor transport was added. A reorganization which took place in G–4 in December 1940 assigned the Transportation Section to the Requirements and Distribution Branch but left its functions unchanged. Those functions were to aid the Assistant Chief of Staff, G–4, in the fulfillment of his responsibilities for "the preparation of plans and policies and the supervision of activities concerning . . . transportation by land and water, including ports of embarkation and their necessary auxiliaries," and "traffic control." [29]

As the emergency advanced and transportation problems became more acute, the supervision exercised by the Transportation Section, G–4, became closer. Early in April 1941 Lt. Col. Charles P. Gross was designated chief of the section, and Ross became his executive.[30] Later in the same month, upon recommendation of its chief, the section was elevated to the status of a branch, and a program for increasing its personnel and expanding its activities was launched.[31] By October 1941 sections had been established to deal respectively with rail, water, and motor transportation, to coordinate lend-lease (defense aid) movements, and to do long-range planning.[32]

The Assistant Secretary of War, and the Under Secretary of War after the establishment of his office in December 1940, also took a hand in planning for Army transportation. They considered this activity incidental to their responsibility for supervision of the procurement of military supplies. In October 1940 the chief of the Contributory Division in the Office of the Assistant Secretary listed among the division's functions the assembling of War Department views and requirements regarding shipping, transportation, and port organization, and the preparation of recommendations.[33] In August 1941 the Contributory Division, then a unit of the Office of the Under Secretary, was renamed Liaison Division, and its field of interest was described as including transportation by railway, truck, water, pipeline, and air.[34] The Contributory Division and the Liaison Division maintained close contact with the Transportation Branch of G–4 and The Quartermaster General's Transportation Division, and took an especially active interest in port conditions and in the provision of port facilities adequate to handle Army traffic.[35]

As the Army's transportation operations expanded, the various elements of the War Department concerned with such activities had occasion to consult more and more with

[29] AR 10–15, Sec. I, par. 11c, 18 Aug 36.

[30] Col Gross and Col Ross remained with Army transportation throughout the war, the former becoming CofT ASF and the latter CofT ETOUSA, each attaining the rank of Maj Gen.

[31] Memo, C of Trans Br for Exec Off G–4 (Mallon), 5 Apr 41, OCT HB G–4 Trans Br Gen.

[32] G–4 Org Chart, 20 Oct 41, OCT HB G–4 Trans Br Gen.

[33] Memo, C of Contributory Div for Dir of Plng Br OASW, 14 Oct 40, USW Plng Br 114.7 Contributory Div.

[34] Memo, C of Plng Br for C of Liaison Div, 21 Aug 41, USW Plng Br 114.7 Liaison Div.

[35] Memo, C of Contributory Div for Dir of Plng Br, 16 Apr 41, sub: Proposed Sale and Lease of Hoboken Terminal, OCT HB Topic New York Hoboken Terminal; Ltr, C of Contributory Div to Port of NY Authority, 12 Mar 41, OCT HB New York Port Plng and Contl of Trans.

the other federal agencies which were interested in the same field. The Interstate Commerce Commission, functioning since 1887 as a regulatory body for the rates and services of domestic carriers, except air, was equipped with and prepared to exercise broader powers than it had possessed in 1917.[36] The Maritime Commission, established under the Merchant Marine Act of 1936 to foster the development of a merchant fleet adequate to carry a substantial part of the water-borne commerce of the United States and to serve military needs in time of war or national emergency, played an increasingly active role in connection with both the construction and the operation of ships. The Civil Aeronautics Administration, established pursuant to the Civil Aeronautics Act of 1938 and subsequent legislation to foster the development of air commerce and aeronautical facilities, was confronted with the difficult task of adjusting the civil air services to meet military requirements. The Transportation Commissioner, a member of the Advisory Commission to the Council of National Defense which was established by the President in May 1940, undertook through consultative and advisory methods to aid the domestic carriers in handling the increasing load which they were called upon to lift and to provide for contingencies. The Division of Defense Aid Reports, concerned with the administration of the Lend-Lease Act of March 1941, had many transportation interests in common with the War Department.[37]

A number of jurisdictional problems came to the fore during the emergency period, including the question of responsibility for liaison with other federal agencies. These problems were the natural consequence of concurrent activities in regard to transportation on the part of the Assistant Secretary of War (later the Under Secretary), G–4 of the General Staff, and The Quartermaster General. They were encouraged by lack of explicitness in some of the Army regulations.

The problem of jurisdiction came up first in the fall of 1939 when The Quartermaster General and the commander of the New York Port of Embarkation differed regarding their respective responsibilities for the scheduling and operation of the Army transports. The port commander recommended that the pertinent Army regulation (AR 30–1110) be amended to strengthen his position, but G–4 refused concurrence on the ground that The Quartermaster General was in the better position to know the over-all requirements of the Army for troop and supply movements, and that his technical direction of the port installations should parallel that exercised over field installations of the Corps of Engineers and the Signal Corps by the chiefs of those services.[38] Soon thereafter, on suggestion of the Chief of Staff, consideration was given to the feasibility of placing the port commanders under the respective corps area commanders, but such decentralization of control was opposed by both The Quartermaster General and G–4, and no further

[36] Interstate Commerce Commission, *53d Annual Report* (Washington, November 1, 1939) pp. 22–23.

[37] See Edward R. Stettinius, Jr., *Lend-Lease: Weapon for Victory* (New York, 1944), pp. 95–96.

[38] Memo, C of Supply and Trans Br G–4 for ACofS G–4 (Tyner), 21 Dec 39, sub: Jurisdiction over ATS; Ltr, TAG to CG NYPE, 2 Jan 40, sub: Command Functions of CG NYPE, AG 370.5 (10–11–39). Both in G–4/29717–35.

steps were taken in that direction.[39] The question was again discussed after complaints had arisen regarding the handling of troop movements at the ports. A new regulation was issued toward the close of 1940, but its provision that the ports of embarkation would be operated "directly under the War Department" was lacking in definiteness.[40]

Another jurisdictional question of increasing importance related to the dividing line between the transportation responsibilities of the General Staff and those of The Quartermaster General. The intensification of the supervision and control exercised by the Transportation Branch of G–4, particularly after April 1941, substantially affected the operations of The Quartermaster General, and there were misunderstandings and delays. Various suggestions were offered for revision and clarification of the pertinent regulations (AR 30–5 and AR 30–905), but agreement was not readily obtained and the confusion continued until after our entry into the war.[41]

The steady extension of control by the Transportation Branch of G–4 is illustrated by the growth of its liaison activities. After an important conference with officials of the Maritime Commission in February 1941, in which representatives of the Under Secretary of War, the Transportation Branch of G–4, and The Quartermaster General participated, the Assistant Chief of Staff, G–4, arranged that thereafter a representative of his Transportation Branch should conduct all negotiations with the Maritime Commission.[42] An officer of the Transportation Branch was designated to maintain liaison with the Highway Traffic Advisory Committee which was set up by the Secretary of War early in 1941.[43] When the Secretary of War appointed a representative of the Under Secretary to confer with the Transportation Commissioner regarding port operations, the Chief of the Transportation Branch immediately arranged to attend all such conferences.[44] In July 1941 the Chief of the Transportation Branch was designated liaison officer for G–4 with the Transportation Section of the Army and Navy Munitions Board.[45] Soon thereafter he was assigned War Department liaison on transportation matters with the Division of Defense Aid Reports, later known as the Lend-Lease Administration.[46] He or his alternate represented the War Department on the Cargo Clearance Committee and the Interdepartmental Shipping Priorities Advisory Committee, which were set up during the summer of 1941 by the Reconstruction Finance Corporation and the Office

[39] Memo within G–4 (Strong for Keyes), 19 Apr 40, sub: Ports of Emb, G–4/31685; Memo, QMG for ACofS G–4, 26 Aug 40, QM 323.91A, G–4/31946; Memo, ACofS G–4 for CofS USA, 28 Aug 40, sub: Contl of Ports, G–4/31946.

[40] DF, G–4 to TAG and QMG, 6 Sep 40, sub: AR Governing Ports, AG 323.341 (9–6–40) (1); AR 270–5, 30 Nov 40, par. 2.

[41] Memo, C of Trans Sec (Ross) for C of Req and Dist Br G–4 (Aurand), 23 Jan 41, sub: Responsibility of QMG and GS in Trans Matters; Memo, ACofS G–4 for CofS USA, 10 Mar 41; Memo, ACofS G–3 for ACofS G–1, 2 Apr 41; Memo, ACofS G–1 for CofS USA, 9 Apr 41. All in G–4/32572.

[42] Memo, ACofS G–4 for CofS USA, 3 Feb 41, sub: Additional Army Transports, G–4/29717–26; Memo, ACofS G–4 for CofS USA, 7 Mar 41, sub: Negotiations with Mar Com, G–4/29717–26; Ltr, SW to Chm Mar Com, 5 Aug 41, G–4/29717–80.

[43] Memo, ACofS G–4 for TAG, 6 Feb 41, sub: WD Liaison for HTAC, G–4/32212, AG 537.4 (1–30–41) HTAC.

[44] Ltr, SW to Trans Com, 9 Apr 41, with pencil notation by Col Gross on file copy, Trans Br G–4/334 (Port).

[45] Ltr, ACofS G–4 for Exec Secy ANMB, 21 Jul 41, G–4/21901–29.

[46] Memo, ACofS G–4 for Dir Def Aid WDGS, 11 Oct 41, G–4/32697–16.

of Production Management, respectively, to consider the availability and the allocation of shipping to carry the strategic imports in which those organizations had a vital interest.[47]

It became necessary on various occasions to protect the established transportation prerogatives, and The Quartermaster General and G–4 took a vigorous and successful stand against all tendencies toward diffusion. The several supply services of the War Department, in an effort to assure that their supplies, once they were ready for shipment, were moved without delay, established their own traffic staffs.[48] These staffs, concerned solely with the prompt delivery of their own shipments, sometimes were critical of The Quartermaster General's operations and believed that they could get better results by direct action. As regards inland traffic, the criticisms dealt chiefly with the requirement that local transportation officers obtain routings for all shipments of two carloads or more from The Quartermaster General.[49] As regards ocean traffic, there was an attempt on the part of the Corps of Engineers to obtain authority to act independently of The Quartermaster General in arranging for the movement of construction personnel and materials to the new oversea bases.[50] Efforts were made during the summer of 1941 to obtain a degree of independence for the Air Corps in the handling of its traffic.[51] As already stated, these efforts toward dispersion of control over Army traffic were forestalled.

The steadily increasing transportation requirements of the Army necessitated not only increased administrative staffs in Washington but also additional field agencies. During the early part of the emergency period there were two Army ports of embarkation in operation, at New York and San Francisco. By the time of our entry into the war an additional port of embarkation had been established at New Orleans, particularly to handle transports serving the Panama Canal Department, and subports had been set up at Charleston, S.C., and Seattle. During the late summer of 1941 construction work was begun on two holding and reconsignment points, located at Marietta, Pa., and Voorheesville, N.Y., which were designed to protect the North Atlantic ports from traffic congestion by supplying intransit storage into which Army and lend-lease supplies could be diverted pending the ability of the ports to receive them and load them promptly on ships. In October 1941 commercial traffic agencies were established in New York and Boston, particularly to keep the rapidly growing volume of lend-lease supplies moving smoothly through the ports and to prevent railway cars from being held unduly long under load.[52]

Several criteria may be cited to indicate the growth of Army transportation activity during the prewar emergency period. On 1 July 1940 the Transportation Division in the Office of the Quartermaster General employed 6 officers and 95 civilians, a total of 101 persons. By 1 December 1941 the

[47] See OCT HB Monograph 10, pp. 24–25; for further liaison activities see Memo, C of Trans Br G–4 for C of Plng Liaison Sec G–4, 4 Sep 41, sub: Bds and Coms, OCT HB G–4 Responsibilities.

[48] AR 30–905, pars. 2e and h, 1 Aug 29, placed limitations on such staffs.

[49] See OCT HB Monograph 6, pp. 117–22.

[50] Memo, ACofS G–4 for ACofS WPD, 3 Apr 41, G–4/32834.

[51] Memo, Trans Br G–4 for Plng Liaison Sec G–4, 23 Jul 41, sub: Transfer of Responsibilities to AAF, G–4/33163.

[52] Special OCT Rpt, Developments in Army Transportation during the Period of Military Preparedness, June 1940–December 7, 1941, pp. 25–28, OCT HB TC Gen Rpts.

staff had increased to 65 officers and 485 civilians, a total of 550. On 1 July 1940 the overhead personnel at the ports of embarkation, the only field installations at that time, included 91 officers, 152 enlisted men, and 2,826 civilians, a total of 3,069. By 1 December 1941 the overhead personnel at ports of embarkation, holding and reconsignment points, and commercial traffic agencies included 574 officers, 2,488 enlisted men, and 9,466 civilians, totaling 12,528.[53] During the same period the personnel of the Transportation Section (later Branch) of G–4 increased from 1 officer and 1 civilian to 18 officers and 12 civilians. On 1 January 1939 the Army Transport Service embraced 6 transports, all owned by the War Department. On 7 December 1941 there were 127 owned and chartered troop and cargo vessels in the service of the Army.[54] The total funds obligated by The Quartermaster General's Commercial Traffic Branch, including salaries and all operating costs and transportation charges, increased from $3,882,000 for the fiscal year 1940 to $52,349,000 for the five and one-quarter month period, 1 July to 7 December 1941. The funds obligated by the Water Transport Branch increased as between these periods from $8,121,000 to $45,724,000.[55]

The Early Months of the War

The first three months of the war brought about marked changes in the management of transportation. New agencies were set up by the President to exercise more complete control over the employment of the nation's transportation resources. The Army's machinery for handling its transportation requirements was completely reorganized. The relationships between the Army and the new civil transportation agencies were tentatively worked out.

The heavy movements of men and supplies which became necessary immediately after the Japanese attack on our Pacific outposts put the entire transportation system to a severe test. In some respects the demands of a two-ocean war were met promptly and efficiently. In other respects there were handicaps which could be overcome only gradually. In the former class was the rail movement of about 600,000 troops with their organizational equipment during the first five weeks of war.[56] The excellent working relationships which had been established between The Quartermaster General's Commercial Traffic Branch and the Association of American Railroads' Military Transportation Section paid off handsomely during this period. Allowing for minor delays due to lack of experience on the part of transportation officers with some of the troop units, inadequate loading facilities at certain camps, and the necessity of drawing railway equipment from distant areas to meet the requirements of large organizations moving out of western stations, the rail results were gratifying.[57] The situation in regard to shipping and port operations was less propitious. There were not enough vessels available and many of those on hand had to be taken out of service temporarily for arming. The Atlantic coast ports were embarrassed by the large amount of lend-

[53] Statistical Summary, Transportation Corps, 15 Oct 42, p. 10, OCT HB MPR.

[54] 1st Ind, Water Div OCT for Hist Off OCT (Watson for Wardlow), 5 Nov 42, SPTOW 314.8–E, OCT HB OQMG Water Trans Br.

[55] Special OCT Rpt, Developments in Army Transportation during the Period of Military Preparedness, p. 2, OCT HB TC Gen Rpts.

[56] *Biennial Rpt, CofS USA, 1943,* p. 8.

[57] Ltr, Pres AAR to CofS USA, 30 Jan 42, G–4/33858; OCT HB Monograph 6, pp. 248–51.

TROOP ENTRAINMENT *soon after the Pearl Harbor attack. A unit leaving Camp Robinson, Ark., December 1941 (top). The unit's organic motor equipment being loaded for movement with the troops (bottom).*

lease freight which had to be transshipped in addition to military supplies. The Army's port of embarkation at San Francisco, although an expansion of facilities had been started a year earlier, was not prepared to handle smoothly the large movements of troops and matériel which were rushed to the Pacific bases.[58]

The President was deeply concerned lest we fail to achieve the most effective utilization of our inadequate shipping resources, and shortly after Pearl Harbor he announced the creation of a Strategic Shipping Board, to act under his supervision. The board consisted of the Chairman of the Maritime Commission, the Army Chief of Staff, the Chief of Naval Operations, and Mr. Harry Hopkins. Its function was to establish policies for and plan the allocation of merchant shipping to meet military and civilian requirements and to co-ordinate the shipping activities of the agencies represented in its membership. The President stated that it was his intention to review the "recommendations" of the board with its members.[59] The Chief of the Transportation Branch, G–4, was designated to represent the Chief of Staff on this board.[60]

The effectiveness of the Strategic Shipping Board was limited because of differences of opinion between the Army, the Navy, and the Maritime Commission regarding the utilization of the merchant fleet and because of the absence of authority, short of the President, to resolve such differences.[61] Accordingly, steps were soon taken with a view to the establishment of an agency with broader powers over shipping than those possessed by the Maritime Commission. Such an agency was needed not only to insure the effective use of the American merchant marine for our own requirements, but also to enable the United States to enter into a co-operative shipping arrangement with Great Britain, which already had placed all British-controlled merchant ships under the management of the Ministry of War Transport.[62] The result was the creation of a War Shipping Administration by executive order of the President, issued 7 February 1942.[63] Although the authority vested in WSA exceeded that which the Army had contemplated, officers of G–4 at once undertook to establish a working relationship with the new agency.

The War Shipping Administrator, Rear Adm. Emory S. Land, suggested that the Strategic Shipping Board be used as a channel for informing his office of the "joint objectives" of the Army and the Navy in regard to merchant shipping. The War Department, however, took the attitude

[58] See OCT HB Monograph 5, pp. 168–73.

[59] Ltr, the President to SW, 8 Dec 41, AG 334.8 Strategic Shipping Bd. Presumably Hopkins was to act as personal representative of the President in this as in so many other matters.

[60] Memo, Chm Mar Com for Harry Hopkins, 17 Dec 41, AG 334.8 Strategic Shipping Bd.

[61] Memo, CofS USA for WSA (Douglas), par. 3, 8 Jan 43, AG 334.8 WSA; Memo, C of Trans Br G–4 for WPD (Gerow), 23 Dec 41; Memo, CofS USA to USN (Admiral Stark), 24 Dec 41, sub: Sea Transportation; Memo, C of Trans Br G–4 for CofS USA, 26 Dec 41, sub: Strategic Shipping Bd—Independent Action by Navy; Memo, CofS USA for USN (Stark), 27 Dec 41. Last four in G–4/29717–26.

[62] When establishment of CCS was being discussed, Gen Marshall pointed out that U.S. could support the proposal only in principle, because centralized control of U.S. shipping had not yet been accomplished. See ARCADIA Proceedings, 10 Jan 42, p. 4.

[63] EO 9054. Fuller discussion of powers of WSA and the Army's part in its establishment is reserved for Ch. VI.

that the order establishing WSA contemplated a direct relationship between that agency and the Army, and that in issuing it the President had abrogated his letter setting up the Strategic Shipping Board.[64] Moreover, the functions to which the War Shipping Administrator referred fell naturally within the scope of the Joint Chiefs of Staff organization which was being developed at that time. The Strategic Shipping Board was not dissolved, but it functioned in a very limited way thereafter.

The President also recognized the necessity of getting the maximum service out of domestic transportation facilities, and on 18 December 1941 he established the Office of Defense Transportation, with broad powers to co-ordinate and regulate the railway, highway, and inland waterway carriers.[65] The Under Secretary of War proposed that representatives of both his office and G-4 be appointed to maintain liaison with ODT. This dual representation was opposed by G-4, and eventually it was arranged that a single Army representative would be designated by the Assistant Chief of Staff, G-4; that the Office of the Under Secretary would co-ordinate its interest in transportation matters through that representative; and that a member of the Office of the Under Secretary might accompany the War Department representative to meetings convened by the Director of Defense Transportation, in order to be informed regarding proposed policies and procedures that might affect the responsibilities of the Under Secretary. The Chief of the Transportation Branch, G-4, was designated War Department liaison officer with ODT.[66]

The Chief of the Transportation Branch, Colonel Gross, arranged for an early conference with the Director of Defense Transportation, Mr. Joseph B. Eastman, during which he explained the Army's transportation machinery and procedures, expressed the hope that "the operation of his office (ODT) would not be too restrictive," and emphasized the need for priority in the movement of troops and war equipment.[67] Gross was favorably impressed with Eastman's attitude on these matters. He kept a wary eye, however, on the development of ODT activities during this formative period. When the ODT Director of Storage requested information regarding the materials being used in the construction of warehouses at Army holding and reconsignment points, Gross expressed the view that he was "getting way beyond his proper province." The information was furnished, however, when ODT explained that it was desired only in connection with a study of the length of the rail haul for lumber used in the construction of such facilities.[68] A request from the ODT Director of Railway Transport for information regarding the rumored acquisition by the Army of certain water-front property at Norfolk elicited from the Transportation Branch, G-4, the statement that all such acquisitions were cleared in advance with the Ocean Shipping Section of the Army and Navy Munitions Board, and an inquiry to determine

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64 Ltr, WSA to SW and SN, 3 Mar 42, sub: Allocation or Requisition of Ships; Ltr, CG SOS to WSA, 9 Mar 42, G-4/29717-26. Both in OCT HB Topic Strategic Shipping Bd.

65 EO 8989.

66 Memo, USW for SW, 29 Dec 41; Memo, ACofS G-4 for USW, 12 Jan 42; Ltr, SW to Dir Def Trans, 21 Jan 42. All in G-4/33932.

67 Memo, C of Trans Br for ACofS G-4, 29 Dec 41, OCT HB Gross Day File.

68 Ltr, C of Trans Br G-4 to ODT, 12 Feb 42; Ltr, ODT to C of Trans Br G-4, 16 Feb 42; Ltr, DC of Trans Br G-4 to ODT, 17 Feb 42. All in Trans Br G-4/000.900 ODT.

how far ODT expected to interest itself in such matters. The ODT response indicated that its interest was in facilities or equipment to be acquired from operating railroads, and arrangements then were made to supply the desired data.[69] While guarding against ODT encroachment on what were considered strictly Army prerogatives, Gross demonstrated during these early weeks his readiness to co-operate with ODT in matters of national interest, such as the establishment of a system of traffic control, the improvement of local transportation in industrial areas, and the location of storage facilities in such a manner as to impose a minimum burden on the transportation system.[70]

The necessity of moving large numbers of troops and great quantities of construction materials and military supplies overseas as rapidly as ships could be found to transport them called for a prompt increase in the Army port establishment. This meant expanding existing ports of embarkation by constructing and leasing new pier and warehouse facilities and enlarging troop staging areas. It also meant increasing the number of Army-operated ports. During the three months following our entry into the war the subports at Charleston and Seattle were given independent status as ports of embarkation, active steps were taken to set up subports at Boston, Los Angeles, and Portland, Oreg., and plans were laid for establishing additional port organizations in the near future. Although the general depot which had been maintained at the New York Port of Embarkation had been removed prior to our entry into the war, so as to leave the installation free to perform its primary function, it was not until February 1942 that similar action was taken in regard to the San Francisco Port of Embarkation.[71] In order to remove the uncertainty which had existed as to which branch of the War Department was responsible for control of the ports of embarkation they were placed under the "command" of the Assistant Chief of Staff, G–4, and other elements of the Army were instructed that no order should be issued to the port commanders regarding movements of troops, supplies, or equipment except through the Chief of the Transportation Branch, G–4.[72]

Before we had been in the war a full month disturbing congestion had developed at the principal ports, New York and San Francisco, and it soon appeared also at Philadelphia and New Orleans. During 1941 the Army had established a release system for the control of its own portbound shipments. Immediately after Pearl Harbor, Army regulating stations were established at strategic points on the transcontinental rail lines for the purpose of holding or diverting shipments destined to Pacific coast ports, as port or other conditions might dictate. Additional holding and reconsignment points were authorized to provide intransit storage for supplies moving toward the South Atlantic, Gulf, and Pacific seaboards. Additional commercial traffic agencies were established at principal ports. It was soon

[69] Ltr, ODT to G–4, 16 Feb 42; Ltr, Trans Br G–4 to ODT, 19 Feb 42; Ltr, ODT to Trans Br G–4, 23 Feb 42; Memo, ACofS G–4 for TAG, 25 Feb 42. All in Trans Br G–4/000.900 ODT.

[70] Ltrs, C of Trans Br G–4 to ODT, 10 Feb 42 and 17 Feb 42, Trans Br G–4/000.900 ODT.

[71] OCT HB Monograph 8, pp. 5–11.

[72] Memo, DCofS USA for TAG, 16 Dec 41, G–4/33854; Memo, TAG for CG's for Armies and Corps Areas, CofS GHQ, and C's of Arms and Svs, 17 Dec 41. Both in AG 612 (12–16–41). This directive evidently was intended to fix ultimate responsibility for the ports but not to relieve QMG of responsibility for technical supervision.

evident, however, that the situation could not be met with anything short of an overall traffic control system, covering not only military but also lend-lease and commercial shipments and capable of holding shipments at the source or of taking any other action that might be necessary to protect the ports from having to receive more freight than they could properly handle. The War Department, the War Shipping Administration, and the Office of Defense Transportation discussed this problem at length during the winter of 1941–42, with the result that the general principles of a system which would operate under a Transportation Control Committee and make extensive use of the machinery already established by the Army were agreed on in mid-March. The development of details was undertaken promptly.[73]

The pressure for quick delivery of supplies in the zone of interior and to oversea bases necessitated further warnings against disregard of The Quartermaster General's transportation prerogatives. The Association of American Railroads complained of the great number of requests for information and special services received from many sources, and the War Department met this situation by requiring that all such requests be addressed to The Quartermaster General's Commercial Traffic Branch.[74] Because of the unusual problems encountered by the Chief of Ordnance in synchronizing the flow of materials and component parts to manufacturing and assembly plants in such a way as to avoid production delays, such shipments were excepted from this requirement.[75] The need for construction work was especially grave in Hawaii, and the District Engineers at San Francisco and Honolulu made certain shipping arrangements directly with the Navy and the Maritime Commission, with the result that freight and personnel of relatively low priority were moved while those of higher priorities waited. The Chief of Engineers was instructed that all ship space, whether required by the Corps of Engineers or by contractors, must be obtained through The Quartermaster General and that priorities on movements would be applied by G–4 in accordance with approved recommendations of the oversea commanders.[76]

Recognizing the need for technical advice and direction of the highest order in connection with the operating phases of the Army's transportation task, The Quartermaster General took steps during the winter months of 1942 to acquire the service of men of broad transportation experience.[77] Leading executives from the commercial field were engaged to head the activities relating to water, rail and motor transportation, traffic control, and intransit storage, and these men became full-time members of the Army transportation staff. There were also special advisers appointed for railway matters and general traffic problems, who remained with their businesses

[73] Detailed discussion of this subject will be included in Vol. II of TC history. See OCT HB Monograph 6, Ch. VII, and Monograph 23.

[74] Memo, TAG for CG's of Armies, Army Corps, Corps Areas, etc., 22 Dec 41, AG 531 (12–16–41) MO–D–M, sub: Contact with AAR, G–4/33858.

[75] Memo, ACofS G–4 for CofOrd, 30 Dec 41, G–4/33858.

[76] Memo, ACofS G–4 for CofEngrs, 6 Feb 42, sub: Ship Space to be Obtained only through QMG, G–4/29717–150; 2d Ind, ACofS G–4 for CofEngrs, 2 Mar 42, OCT HB Wylie Staybacks.

[77] Memo, C of Trans Div OQMG (Dillon) for ACofS G–4, 4 Feb 42, sub: Trans Org; Memo, ACofS G–4 for Dillon, 6 Feb 42. Both in ASF Hq QMG. When this exchange took place G–4 (Somervell) believed that QMG had done well in obtaining strong men as advisers, but needed more of that type on his operating staff.

but gave attention to War Department matters when requested.[78] Many other technical transportation men were added to the organization at this time, some being engaged as civilian employees while others were taken into the Army as commissioned officers. During the three-month period from 1 December 1941 to 1 March 1942, the officer personnel of The Quartermaster General's Transportation Division increased from 65 to 74, the civilian personnel from 485 to 632, and the total staff from 550 to 706.[79]

During this period the Transportation Branch of G-4 further increased its organization and intensified its supervision of transportation operations. In order to effect the closest possible co-ordination between staff planning and the execution of troop and supply movements, it established a Movement Section. Since the ports of embarkation had been made directly responsible to G-4, the Water Section of the Transportation Branch was enlarged and redesignated the Port and Water Section. An Air Section was established to supervise emergency movements of Army personnel and matériel by the civil air lines in the United States and its possessions.[80] The task of providing ocean transportation for the personnel of military missions to the USSR, the Middle East, Africa, and China, together with civilian representatives of the State Department and other federal agencies, had become extremely difficult because of the scarcity of passenger space to certain destinations and the great military need; therefore, with a view to obtaining better results through centralization, the Transportation Branch took over the making of arrangements for all such traffic.[81] The Chief of the Transportation Branch also sought to centralize dealings with the Navy on transportation matters insofar as practical, and as a step in that direction arranged for his office to control the utilization of passenger and freight space made available to the Army on Navy ships.[82] An Executive and Administrative Section was set up to relieve the branch chief and other sections of certain office details. A Legal and Fiscal Section was projected, but evidently it was not activated.[83] The staff of the Transportation Branch on 9 March 1942 included 44 officers.[84] A competent estimate places the number of civilians employed with the branch on that date at 40.

The overlapping interests of the Under Secretary of War and G-4 again came into evidence during these early war months. Pursuant to his concern with the procurement of war matériel, the Under Secretary designated a "traffic and transportation adviser" to assist him.[85] The adviser promptly undertook a survey of the organization and operations of The Quartermaster General's

[78] Ltr, CofT for Dir of Def Trans, 16 Mar 42, SPRYA 322 Trans Div, OCT HB Gross Day File.

[79] Statistical Summary, Transportation Corps, 15 Oct 42, p. 10, OCT HB MPR.

[80] Memo, TAG for ACofS WPD and ACofS G-4, 12 Apr 41, WPD 3397-27; Memo, TAG for ACofS WPD, ACofS G-4, and C of AAF, 16 Jul 41, WPD 3397-27; Memo, ACofS G-4 for C of Trans Br G-4 (Somervell for Gross), 23 Dec 41, Trans Br G-4/580, Vol. II.

[81] Memo for record by author, 17 Feb 44, sub: Missions to Middle East; Ltr, C of Trans Br G-4 to State Dept (Davis), 26 Dec 41. Both in OCT HB G-4 Trans Br Misc.

[82] Memo, by Lt Col C. H. Kells, 22 Jan 42, sub: Conf Held by Rear Adm Taffinder, OCT HB G-4 Trans Br Army-Navy Relations; Memo, ACofS G-4 for Rear Adm Taffinder USN, 6 Feb 42, OCT HB Gross Day File.

[83] Functional chart of G-4, 19 Jan 42, OCT HB G-4 Trans Br Gen.

[84] OCT Assignment Memo 1, 13 Mar 42, OCT HB TC Gen Key Personnel.

[85] Memo, OUSW for QMG, 13 Jan 42, sub: Survey of WD Trans; Memo, DCofS for USW, 14 Jan 42. Both in ASF Hq QMG.

Commercial Traffic Branch. G–4 objected to this survey on jurisdictional grounds, and pointed out that it might lead to serious confusion. An understanding was reached between the Assistant Chief of Staff, G–4, and the Under Secretary that the investigation would be limited to such phases of The Quartermaster General's transportation activity as affected the movement of raw materials and semimanufactured articles.[86] It also was arranged that copies of reports by the Under Secretary's adviser would be furnished The Quartermaster General, who would investigate any alleged inefficiencies promptly.

Concurrently, a thorough inquiry into the work of the Commercial Traffic Branch was undertaken by an experienced railroad executive who was then an officer on the staff of the Transportation Branch, G–4. The report of this officer gave general approval to the organization and operations of the branch. His principal recommendations were that aggressive steps be taken to overcome personnel shortages, that overcrowded office conditions be relieved, that the system of communication with field installations be amplified, and that closer liaison arrangements be worked out between the Commercial Traffic Branch and the Water Transport Branch in connection with the release and routing of portbound freight. The Quartermaster General's response indicated that steps already had been taken to accomplish three of these objectives, and that the other recommendation was receiving attention.[87]

Aside from the lack of sufficient equipment and facilities to accomplish the transportation task which confronted the Army, the greatest handicap was the lack of integration in the headquarters organization. The Quartermaster General was responsible under the law and the regulations for accomplishing the movement of troops and matériel. The Transportation Branch, G–4, was responsible for the supervision of these operations, and considered itself responsible in the last analysis for their success.[88] In its effort to make sure that no undertaking failed for lack of preparation and direction, the Transportation Branch sometimes encroached on The Quartermaster General's domain. This was notably true in regard to ports of embarkation, which were responsible to G–4, but which at the same time required technical supervision from The Quartermaster General's staff of experts in connection with the operation of both shore facilities and floating equipment. The Chief of the Transportation Division, OQMG, expressed the following opinion: "The real weakness of our transportation setup is that the entire job, inland, terminal, and oversea is not the direct responsibility of one operating organization." [89]

This weakness was recognized in the General Staff also. Accordingly, when the War Department was reorganized under the wartime powers of the President, effective 9 March 1942, and a Services of Supply was established to relieve the General Staff of the supervision of supply and administrative services, one of the components of SOS was a transportation organization which ab-

[86] Memo, ACofS G–4 for USW, 15 Jan 42; Memo, C of Trans Br G–4 for Exec Secy ANMB, 10 Mar 42. Both in OCT HB USW.

[87] Memo, C of Rail Sec Trans Br G–4 for ACofS G–4, 7 Feb 42, sub: Functional Opn of CTB; 1st Ind, QMG for ACofS G–4, 17 Feb 42. Both in OCT 022 OQMG Coml Traf 1941–42.

[88] Memo, C of Trans Sec G–4 (Ross) for C of Req and Dist Br G–4 (Aurand), 23 Jan 41, sub: Responsibilities of QMG and GS in Trans Matters, G–4/32572.

[89] Memo for ACofS G–4, 4 Feb 42, sub: Trans Org, ASF Hq QMG.

sorbed the transportation functions previously performed by G–4 and The Quartermaster General, and relieved the Under Secretary of the work which had been assumed by his transportation staff.[90] This was a long first step in the direction of integration in Army transportation administration. It is noteworthy that the step was taken boldly early in the war, and was not the result of slow evolution as in World War I. It is noteworthy also that the new transportation organization was placed on the supply or technical service level, rather than in the General Staff as in 1917–18.

Transportation Service Established

"Transportation and traffic control" were among the responsibilities assigned to the Services of Supply (later renamed Army Service Forces) in the reorganization of the War Department in March 1942.[91] For the performance of these responsibilities General Somervell, commander of SOS, created a Transportation Division, to which he assigned the staff and the functions previously assigned to the Transportation Branch of G–4 (except the Motor Section), The Quartermaster General's Transportation Division, the ports of embarkation including their staging areas, the regulating stations, and the holding and reconsignment points.[92] In his initial directive General Somervell designated as Chief of Transportation Col. Charles P. Gross, who had been Chief of the Transportation Branch, G–4, and Gross was promptly promoted to brigadier general.[93] Concurrently, Brig. Gen. Theodore H. Dillon, who had been Chief of the Transportation Division, OQMG, was designated Deputy Chief of Transportation.

On the day he assumed office the Chief of Transportation announced the initial organization of the Transportation Division.[94] It consisted of two groups of units, designated respectively the functional staff and the operating branches. The functional staff included the Deputy Chief of Transportation, who was to act as the principal co-ordinating agent of the division, and a number of units which were to deal with the various aspects of administration and the supervision of operating activities. The several operating branches were to deal with the more technical aspects of transportation and with the execution of troop and supply movements.

This organizational set-up, having been hastily and experimentally accomplished, was subject to early revision. In April 1942 the name of the Transportation Division was changed to Transportation Service, and concurrently the staff units and the operating branches were redesignated divi-

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[90] EO, 28 Feb 42, sub: Reorg of the Army, etc.; WD Cir 59, 2 Mar 42, sub: WD Reorg; Memo, CG SOS for C's of Supply Arms and Svs, etc., 9 Mar 42, sub: Initial Directive for the Org of SOS; WD SO 58, 6 Mar 42, par. 6; SOS Adm Memo 3, 21 Mar 42, sub: Reassignment of Sections, etc.

[91] WD Cir 59, 2 Mar 42, par. 7d (3).

[92] Memo, CG SOS for C's of Supply Arms and Svs, etc., 9 Mar 42, sub: Initial Directive for Org of SOS, par. 14c (3). Although not expressly mentioned, commercial traffic agencies were transferred to Transportation Division. The Motor Section of the Transportation Branch G–4 had been dealing principally with organizational equipment, rather than with commercial motor transportation, which accounts for its not being transferred.

[93] *Ibid.*, par. 12f (7). Although from April to July 1942 Gross officially was known as Chief of Transportation Service, the title Chief of Transportation is used uniformly in this history.

[94] OCT Office Memo 1, 9 Mar 42, sub: Org of Trans Div.

sions.[95] There is no apparent advantage in tracing step by step the many organizational adjustments which were made during this formative period, but it may be noted that a number of new units were set up to deal with rapidly expanding aspects of the work and that clearer definition was given to the functions of the Deputy Chief of Transportation and the Executive Officer. The organization of the Office of the Chief of Transportation, as it had developed up to 30 June 1942, is shown in Chart 1.

Although the headquarters organization expanded in most directions between its establishment and 31 July 1942 when the Transportation Service became the Transportation Corps, it lost control of the administration of priorities and the assignment of space for the air movement of Army personnel and freight. This control, which had been exercised by the Transportation Branch of G-4 during the early weeks of the war, had passed naturally to the Chief of Transportation on 9 March 1942.[96] Originally the control had extended only to air movements by commercial planes within the United States and its possessions, but its scope had been broadened to cover domestic and oversea movements by both commercial and Army aircraft.[97] In order to administer this responsibility properly, the Chief of Transportation had undertaken to build up a strong staff, known for a time as the Air Priorities Branch and later as the Air Division, and had commissioned an executive of one of the leading commercial air lines to head this unit.[98] The Army Air Forces, however, was not favorably disposed toward this arrangement, and eventually General Somervell acquiesced in the AAF view. Effective 1 July 1942 the control over priorities and the personnel of the Air Division were transferred to the Army Air Forces.[99]

General Gross was opposed to the change. As Chief of the Transportation Branch of G-4 he had contended strongly for the retention of this prerogative when the question came up soon after Pearl Harbor, on the ground that control of all Army traffic should be centralized in one office.[100] After the conclusion of hostilities he again expressed the opinion that movements by air require careful co-ordination with surface movements in order to obtain an impartial administration of priorities, and that this end can be accomplished satisfactorily only if the entire responsibility rests with one agency. The experiences of the war, he said, justified his earlier claims.[101]

At this point it is of interest to note that in May 1942, after conversations between Brig. Gen. W. D. Styer, Chief of Staff of the Services of Supply, and an officer of the Air Ferrying Command, Styer proposed that "aerial ports of embarkation" be established and operated by the Transportation

[95] SOS GO 4, 9 Apr 42; OCT Office Memo 28, 11 Apr 42; OCT Office Memo 34, 22 Apr 42. These and other directives pertaining to organization are in OCT HB TC Gen Cirs.

[96] Directive 3 of Military Director of Civil Aviation, 5 Feb 42, sub: Priorities for Air Trans, Trans Br G-4/580, Vol. II; WD Cir 168, 1 Jun 42, sub: Air Travel and Trans.

[97] Memo, ACofS G-4 for CofS USA, 21 Feb 42, sub: Priority Air Trans Overseas, Trans Br G-4/580, Vol. II.

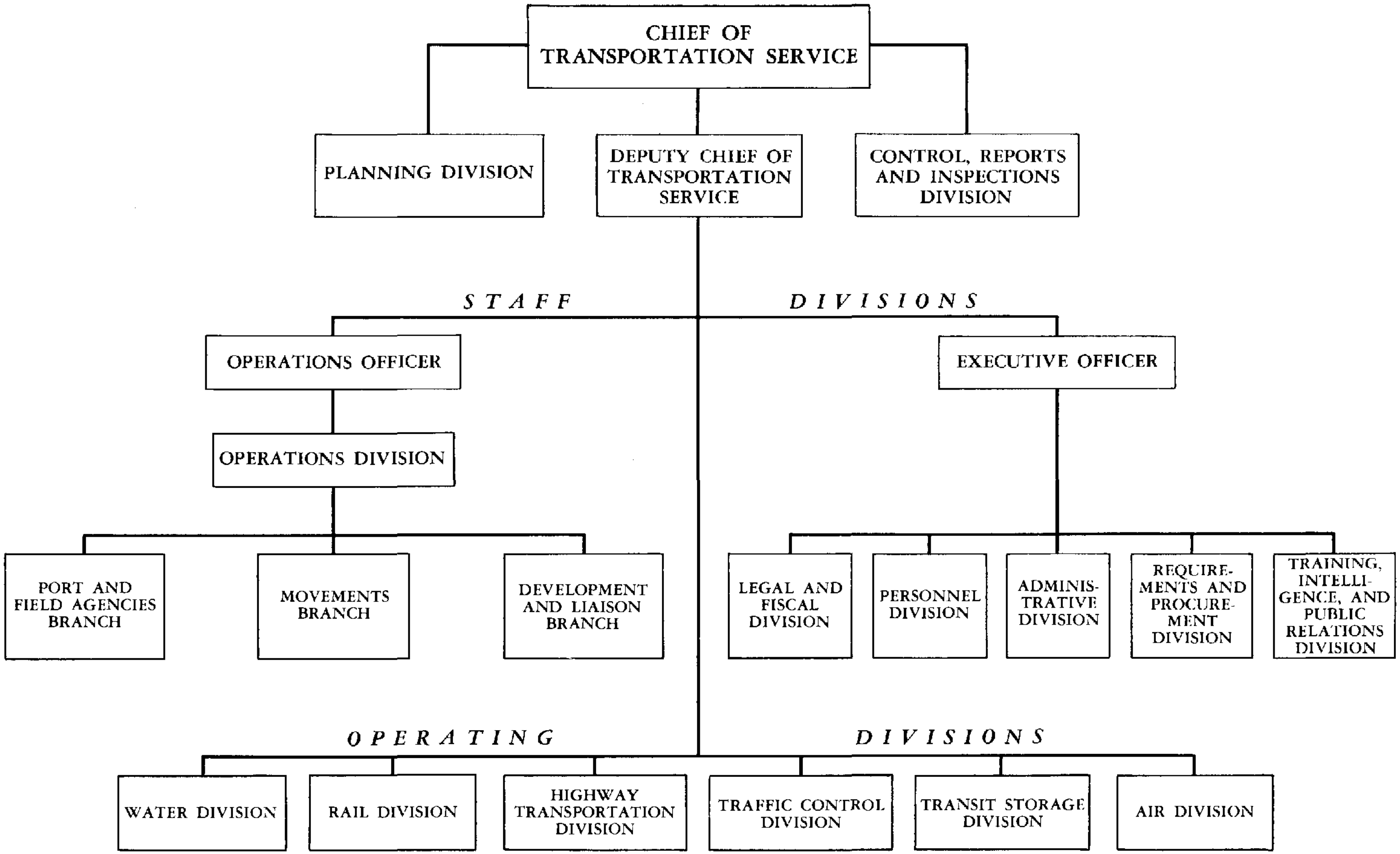
[98] Developments Dec 41-Jun 42 are reviewed in Hist Rec, Air Priorities Br and Air Div, 1 Jul 42, OCT HB Air Div.

[99] Memo, Somervell for Gross, 21 Jun 42, ASF Hq Trans 1942; WD Cir 211, 1 Jul 42, Sec. III. At this time Somervell was endeavoring to persuade AAF to leave all port (water) operations to CofT SOS, and developments suggest that a trade was made.

[100] Memo, C of Trans Br G-4 for C of Plng and Liaison Sec G-4, 22 Dec 41, sub: EO Granting SW Certain Powers over Civil Aviation, G-4/33887.

[101] Gross final rpt, p. 18.

CHART 1—ORGANIZATION OF THE OFFICE OF THE CHIEF OF TRANSPORTATION: 30 JUNE 1942



Source: Administrative Log of the Transportation Corps, prepared in the Historical Unit, OCT, July 1945, period I, exhibit I–F.

Service at West Palm Beach, Fla., Presque Isle, Maine, and Hamilton Field, Calif.[102] After the Transportation Service had developed a tentative plan, the proposal was sent to the Army Air Forces for concurrence.[103] The response, received two months later, was not a concurrence.[104] Rather, it stated that since the responsibility for the movement of cargo and personnel by air had been assigned to the Army Air Forces as of 1 July 1942, and since the basic directive establishing the Army Air Forces charged that agency with command and control of all AAF stations not assigned to defense commands or theaters of operation, aerial ports of embarkation necessarily would be operated by the Army Air Forces.

The build-up of the Army's transportation field organization went forward rapidly under the Transportation Service. The subport of Boston became a port of embarkation; a port of embarkation was activated at Hampton Roads, Va., and a subport was installed at Mobile, Ala. In order to relieve the port of embarkation at Seattle and facilitate the flow of supplies to Alaska, subports were set up at Prince Rupert, British Columbia, and Juneau, Alaska. One additional holding and reconsignment point was authorized, bringing the total to nine. The commercial traffic agencies were redesignated port agencies and their number was increased. A beginning was made of establishing traffic control agencies to regulate the movement of Army freight at important inland industrial centers, freight consolidating and distributing agencies to handle less-than-carload shipments moving between certain points, and transportation agencies to supervise all installations and activities of the Transportation Service within the areas assigned to them. The establishment of a training center for transportation troop units was authorized.

After the United States had been at war for six months the Chief of Transportation summarized the accomplishments of his organization during that period and compared them with accomplishments for a corresponding period in World War I.[105] He stated that 390,000 troops had been embarked for oversea destinations during the six months since 7 December 1941, against 122,400 during a like period in 1917; a total of 1,900,000 short tons of cargo had been shipped overseas, compared with 287,000 short tons. Ten ports of embarkation and subports were being operated to serve seven oversea theaters in 1942, compared with three ports of embarkation serving one oversea theater in 1917. The statement pointed out, furthermore, that a complete system of traffic control had been placed in operation, including numerous installations operated by the Transportation Service, and that this system had effectively forestalled port congestion such as had seriously interfered with the Army's oversea effort during the first year of World War I. The total military and civilian personnel of the Transportation Service was stated to be approximately 60,000, or about four times the total transportation personnel of the Army on 7 December 1941.

Although these results were considered gratifying, the Chief of Transportation be-

[102] Memo, CofS SOS for Dir Opns Div SOS, 1 May 42; Memo, CofT for Dir Opns Div SOS, 4 May 42. Both in OCT 323.3. For data regarding projected North Atlantic Ferry Route see CMTC 21st Mtg, 5 Jun 42.

[103] Memo, CG SOS for CG AAF, sub: Air Ports of Embarkation, 23 May 42, OCT 323.3.

[104] Memo, CG AAF for CG SOS, 21 Jul 42, OCT 323.3.

[105] Memo for Gen Somervell, 11 Jul 42, OCT 563.5.

lieved that his organization was operating under certain handicaps and manifested certain shortcomings which demanded rectification. This situation was laid before the Chief of Staff on 30 June 1942.[106] It was pointed out that the transportation officers on duty with the armies, army corps, corps areas, posts, camps, and stations were designated by the respective commanders, that they sometimes were not qualified for the task, and that they were not subject to proper supervision by the Chief of Transportation. Adequate provision had not been made for the procurement and training of military personnel to perform transportation tasks, though a large increase of such personnel would soon be required. The fact that the military staff of the Transportation Service consisted of officers detailed from other branches of the Army meant that the Transportation Service lacked the unity of purpose, technical competence, and *esprit de corps* which were considered essential. Because of personnel shortages which already existed, the Transportation Service lacked the means, as well as the authority, to satisfactorily carry out its full responsibility.

With a view to correcting this situation, a number of recommendations were presented to the Chief of Staff. It was proposed that the Transportation Service be constituted a separate corps paralleling in a general way the Corps of Engineers and the Quartermaster Corps, and that the Transportation Corps have a distinctive insigne. It was proposed that the Transportation Corps have its own replacement training center and officer candidate school; that officers of the Transportation Corps be assigned as transportation officers at posts, camps, and stations, and on the staffs of tactical units; that port battalions, port headquarters and headquarters companies, and railhead companies, then designated Quartermaster units, be redesignated Transportation Corps units. It was proposed also, in view of the urgent necessity for rapid expansion of the staff, that the restrictions on recruitment of military personnel from civil life be relaxed in favor of the Transportation Corps, and that the corps be authorized to acquire officers and enlisted men having transportation experience, although they already were in service with other branches of the Army.

The Judge Advocate General, who was requested to review these proposals from a legal point of view, found that the Secretary of War by appropriate orders could create a transportation corps as a separate command for the period of the war and six months thereafter, but that under existing statutes and regulations a transportation corps could not be established as a permanent component of the Army.[107] He also pointed out certain conditions relating to the acquisition of personnel from other branches of the Army by the proposed new corps, conditions which existed because of the corps' temporary status.

Transportation Corps Created

The main proposal to establish a transportation corps was approved by the Chief of Staff, but certain of the subsidiary recommendations were not accepted.[108] The request for a Transportation Corps replacement training center and a Transportation Corps officer candidate school, and for relaxation of the restriction on the procure-

[106] Memo, CG SOS for CofS USA, sub: Reorg of TS, OCT 020 Org of TC.

[107] Memo, JAGD for ACofS G-4, 14 Jul 42, sub: Reorg of TS and Creation of TC, OCT 020 Org of TC.

[108] Memo, DCofS USA for CG SOS, 17 Jul 42, OCT 020 Org of TC.

ment of personnel, were disallowed because it was believed that the problems which gave rise to these recommendations could be met by means already available or soon to become available. Such means included a training center for transportation troop units which recently had been authorized and an officer candidate school which was then under consideration for establishment as an installation of the Services of Supply.

Creation of the Transportation Corps was announced on 31 July 1942, effective as of that date.[109] The new corps was placed under a Chief of Transportation, who was charged with "the direction, supervision, and coordination of all transportation functions of the War Department, and with the operation of field installations pertaining thereto." All duties previously assigned to the Transportation Service were transferred to the Transportation Corps, and the former designation was ordered discontinued. All officers and warrant officers who were serving with the Transportation Service on the date of its discontinuance were detailed to duty with the Transportation Corps, and enlisted men who were assigned to the Transportation Service were transferred to the Transportation Corps. All officers and warrant officers who had been designated by their commanding officers to serve as transportation officers at posts, camps, stations, and other military activities were directed to continue performing the duties of that office under the jurisdiction of the commanders appointing them, until the Chief of Transportation should effect their detail to duty with the Transportation Corps or should designate Transportation Corps officers as their successors. The Quartermaster troop units known as port headquarters and headquarters companies, port battalions, railhead companies, and aviation boat companies were transferred to the Transportation Corps and appropriately redesignated.[110]

[109] WD GO 38, sub: Estab of TC.

[110] The transfer of railhead companies and aviation boat companies was rescinded within a few weeks. WD GO 42, 17 Aug 42, Sec. I; WD GO 46, 17 Sep 42, Sec. II.

CHAPTER III

The Office of the Chief of Transportation

The mainspring of the new Transportation Corps, the driving and controlling force, naturally was the Office of the Chief of Transportation. The functions assigned to General Gross were greatly enlarged when the Transportation Corps was established, and they were increased further as the war progressed. The task which fell to his immediate office therefore was an expanding one, involving not only the management of increased personnel and added installations but also the development of organizations, equipment, and procedures to meet the growing transportation requirements of the Army.

An indication of the growth of Transportation Corps activities is found in the growth of its personnel. Between 31 July 1942, when the corps was created, and 30 June 1945 the total of the Transportation Corps' military strength and the civilian personnel directly employed by installations under the control of the Chief of Transportation in the zone of interior increased from 81,008 to 352,217, or 335 percent. On the latter date, moreover, numerous other workers were employed at TC installations in the zone of interior, including the military personnel of other arms and services, the employees of stevedores and other contractors, Italian service units, and German prisoners of war, and the Chief of Transportation reported that taking these into account the total of the personnel under his control was 434,998. On that basis the increase was over 400 percent.[1]

The functions assigned to the Chief of Transportation, as stated in the directive by which the Transportation Corps was created, were expressed in general terms which might easily convey an inaccurate impression of the duties actually assumed by the new corps.[2] There were certain functions directly connected with transportation which at that time were not within his jurisdiction. In one important traffic field, where the Chief of Transportation clearly had jurisdiction, he was impelled by practical considerations to delegate a considerable part of his authority to another branch of the Army. Under these circumstances, and in order to better understand subsequent developments, it is desirable to examine the responsibilities which actually

[1] See Statistical Summary, TC, 15 Oct 42, p. 10, for data for 31 Jul 42; STM–30, Strength of the Army, 1 Jul 45, p. 26, shows military strength of TC as 263,139, of which 67,071 were in continental U.S. and 196,068 were outside U.S.; ASF MPR, Sec. 5, Pers, 30 Jun 45, p. 22, shows civilians directly employed in ZI as 89,078. Total of 434,998, given in Gross final rpt, p. 116, was computed by Dir of Pers OCT to show total military and civilian personnel under the command or supervision of CofT; this figure does not include personnel of other services, civilians, or prisoners of war utilized in transportation operations in theaters.

[2] Statement of general duties of CofT in AR 55–5, par. 3, 5 Oct 42, also lacked definiteness.

were assigned to the Chief of the Transportation Corps at the beginning of the corps' existence.

Initial Responsibilities

As regards inland transportation in the zone of interior, the Chief of Transportation was responsible for making all arrangements for nontactical movements of Army personnel and matériel by railway, highway, and waterway carriers. He was responsible for the control of such movements with a view to timely deliveries and for the avoidance of congestion along the lines and at the terminals of the carriers, at Army installations, and at the ports. He set up and controlled such installations as were necessary for the proper performance of these functions. He established the requirements for locomotives and cars for utility railways, except at installations exclusively under the control of other services, exercised a general supervision over the operation and maintenance of such equipment, and arranged with common carriers for services to and from all Army installations. The Chief of Transportation was charged with the effective utilization of the Army's fleet of tank cars, and in fulfillment of that responsibility he determined when additional cars were needed and what types were best suited to the requirements.[3] He gave technical supervision to the activities of transportation officers at Army posts, camps, and stations (other than Army Air Forces installations), subject to the orders of the installation commanders, and provided qualified officers to fill those positions upon request.[4] He had no duties in connection with transportation by aircraft in the zone of interior.

As regards deepwater transportation, the Chief of Transportation was responsible for operating the ocean-going vessels which were owned or chartered by the Army, and arranging for the allocation of additional vessels by the War Shipping Administration to complete Army requirements. He planned for and executed the movement of Army passenger and freight traffic on these vessels, as well as on transports operated by the Navy and on commercial vessels. He established and controlled ports of embarkation in the zone of interior for the storage and transshipment of freight, for the staging and transshipment of troops and other passengers, and for the operation and repair of vessels. He established the requirements of the Army for the many types of harbor craft and other small vessels, procured such vessels, and assigned them to the elements of the Army by which they were utilized. The Chief of Transportation trained the troop units required for the operation of ports in oversea theaters, and in the summer of 1942 he was preparing to train other troop units which, it then was apparent, would be needed by theater commanders in connection with their marine operations.[5] He had no responsibilities in connection with transoceanic air traffic.

In the communication zones of the oversea theaters, transportation operations were entirely under the control of the theater commanders, but they depended largely on the zone of interior for personnel and equipment with which to fulfill their responsibilities. The Chief of Transportation for the War Department, upon request, detailed experienced transportation officers to serve

[3] AR 30–905, par. 14, 1 Aug 29.
[4] WD Cir 130, Sec. IV, 1 May 42; WD GO 38, par. 4, 31 Jul 42.
[5] AR 30–1105, 30 Jul 32; AR 30–1110, 1 Apr 32; WD TM 10–380, 14 Feb 41, sub: Water Trans; WD GO 38, par. 5, 31 Jul 42.

in theater and base section headquarters. As already indicated, he procured equipment and trained troop units for port and marine operations in the theaters. He controlled the movement of all supplies by water to oversea destinations in accordance with theater requisitions. He developed shipping procedures and co-ordinated ship sailings with the theater commanders so as to avoid congestion at oversea ports and confusion in the delivery of supplies to depots and dumps. At the inception of the Transportation Corps the Chief of Transportation had no responsibilities in connection with the operation of railway, highway, or air services in the theaters.

Notwithstanding his clear authority in regard to arrangements for ocean transportation, General Gross found it necessary soon after the establishment of the Transportation Corps to take steps to assure uniform compliance with his prerogatives. In connection with the shipment of freight from California ports for use in construction work on the Pan-American Highway, he objected to the Corps of Engineers making shipping arrangements directly. The Commanding General, San Francisco Port of Embarkation, accordingly was informed that all matters relating to the procuring of ships or shipping space, the assembling of cargo at shipside, and the loading of vessels properly belonged to the Transportation Corps and that, while there would be no objection to delegating authority for such work to an Engineer officer at a port where there was no representative of the Transportation Corps, such an officer should be designated acting transportation officer for that particular operation.[6] Similar advice was sent to other ports of embarkation for their guidance. Also the Chief of Transportation informed the War Shipping Administration that considerable confusion had developed because of efforts on the part of the Army Air Forces to book cargo directly with the operators of WSA vessels, and requested that no space on ships controlled by WSA be allocated to the Army except through the Transportation Corps.[7]

In the field of domestic transportation, likewise, General Gross found it necessary to protect his sphere of authority from encroachment. He protested to General Somervell that, despite previous instructions, misunderstanding still existed among the supply services. He specifically cited the fact that the Ordnance Department was maintaining two transportation sections which overlapped the Transportation Corps and were not "adequately responsive" to the policies laid down by the Chief of Transportation.[8] He pointed out, furthermore, that the Ordnance Department was operating a school of transportation at one of its arsenals, the curriculum and the policy of which had not been reviewed or approved by the Chief of Transportation. The result of this protest was a directive to the chiefs of supply services, requiring that any transportation activities contrary to the regulations be discontinued at once, and pointing out that officers engaged in such activities for other supply services were subject to detail in or assignment to duty with the Transportation Corps.[9] This action had the desired effect so far as the several elements

[6] Ltr, ACofT for CG SFPE, 23 Nov 42, OCT 486.1 Los Angeles.

[7] Ltr, CofT to Dir of Allocations WSA, 17 Oct 42, OCT HB Gross WSA.

[8] Memo, CofT for CG SOS, 14 Oct 42, sub: Clarification of Responsibility for Trans Functions, AG 322.999 Trans Corps.

[9] Memo, CG SOS for C's of Supply Svs, 17 Oct 42, AG 322.999 Trans Corps.

of the Services of Supply were concerned. A different situation prevailed in regard to the Army Air Forces, and this is a matter which calls for some elaboration.

Delegation of Authority to the Army Air Forces

During the prewar emergency and during the war there was a general trend toward greater autonomy on the part of the Army Air Forces, and that trend was apparent in transportation matters. In the preceding chapter reference was made to the differing opinions regarding the control of movements by aircraft and also to the transfer of that function from the Transportation Service to AAF on 1 July 1942. A similar situation was developing during the early part of 1942 in regard to shipments of AAF freight by domestic surface carriers. The Air Forces greatly enlarged their traffic organization throughout the country and placed at its head a former traffic manager of one of the large aircraft manufacturing concerns. This organization paralleled in many ways the field establishment which was being built up by the Chief of Transportation.

The tendency toward AAF autonomy in the control of domestic freight traffic was given a measure of recognition in May 1942, when the responsibilities of the Chief of Transportation for the supervision of transportation officers at posts, camps, and other Army stations were being defined. The War Department circular dealing with this subject expressly provided that the transportation officers at air installations and with air activities would be under the supervision of the Director of Traffic and Transportation at Army Air Forces' headquarters. "under authority delegated by the Chief of Transportation Service." [10] The delegation of authority appears to have been made informally in the course of the conferences between General Gross and AAF officials regarding the text of the circular.

During the summer of 1942 the Office of the Chief of Transportation was engaged in preparing a revision of the basic directive governing transportation by commercial carriers in the zone of interior.[11] The Army Air Forces took that occasion to present their claim for independence in the handling of their own freight traffic. They proposed that AAF be given authority to route, divert, and trace shipments; to contact the railroads with reference to classification and rate matters; to maintain a rate service; and to furnish transportation information to and obtain reports from transportation officers at AAF installations.[12] Numerous conferences and exchanges of memoranda between representatives of the Air Forces and the Chief of Transportation followed, during which the merits of the AAF proposal were explored and an effort was made to determine how far such an arrangement could be accepted without curtailment of the Transportation Corps' over-all effectiveness.[13]

The Chief of Transportation, although opposed in principle to any qualification of his control over the Army's domestic traffic, recognized that his field organization was

[10] WD Cir 130, Sec. IV, 1 May 42; see also file AG 300.5 (4-16-42) WD Cir 130, Sec. IV.

[11] AR 30-905, 1 Aug 29, Trans by Coml Means—Gen.

[12] Memo, C of Legal and Fiscal Div OCT for DCofT, 20 Jul 42, sub: Conf re Revision AR 55-105 (30-905), OCT 519 (AR 30-905) Vol. II.

[13] Memo, C of Legal and Fiscal Div OCT for AAF (Boudreau), 15 Aug 42; Memo, CofT for Dir of Contl Div SOS, 30 Sep 42. Both in OCT 500 (AR 55-105).

still in the formative stage, and knew also that the Deputy Chief of Staff supported the AAF position.[14] The result of the discussions, which extended over a period of several months, was a compromise. In October 1942 it was agreed that the revised regulation should leave the Chief of Transportation's authority over War Department traffic unimpaired, but should provide that he might delegate authority and duties as he deemed proper and necessary. After this agreement and before the revised regulation actually was published, the Chief of Transportation delegated to the Air Forces such authority as he considered "consistent with general policy and retention of control necessary to avoid traffic congestion . . . and . . . with keeping the War Department in a strong position before the transportation systems and other governmental agencies." [15]

The authority delegated to the Army Air Forces included the inland routing of all AAF freight shipments, but certain conditions were stipulated. As regards portbound shipments the Air Forces were to procure releases from the Chief of Transportation and honor any requests which he might make for changes in terminal routings. As regards domestic movements the Air Forces were expected to follow any requests made by the Chief of Transportation's Traffic Control Division relative to routings and diversions considered necessary to the avoidance of traffic congestion. It was stipulated further that any AAF regulations affecting general transportation policies would be referred to the Chief of Transportation for concurrence prior to issuance, so as to avoid the possibility of conflicting instructions and the dissipation of War Department influence with transportation agencies and regulatory bodies. The Air Forces expressed complete concurrence in these principles and a desire to co-operate with the Chief of Transportation in their enforcement.[16]

The Army Air Forces' letter of concurrence informed the Chief of Transportation of a plan to establish fifteen transportation districts within the continental United States and to activate a field supervisory office in each district, which would have technical control of all AAF transportation officers. The plan included the decentralization of routing to the districts. At that time (October 1942) the Chief of Transportation did not take exception to this arrangement.[17] In the following December, however, with his own field organization greatly expanded and reorganized under the control of nine zone transportation officers, he took a different position. He then pointed out that with Air Forces and Transportation Corps field agencies operating side by side there inevitably would be overlapping and duplication, and he proposed that the Transportation Corps absorb the AAF transportation agencies, except those pertaining to organic motor equipment and air transportation.[18] The Chief of Transportation conceded that AAF headquarters would require a transportation staff to maintain necessary liaison with his office.

This proposal was not approved. Instead, the Deputy Chief of Staff directed that

[14] See comments of Col L. W. Finaly, Exec OCT, 5 Dec 49, OCT HB Topic AAF.

[15] Memo, CofT for CG AAF, 5 Oct 42, sub: Changes in AR 55-105 and AAF Regulations 75-1, OCT 500 (AR 55-105); AR 55-105, par. 2g, 29 Dec 42.

[16] Memo, CG AAF for CofT, 17 Oct 42, OCT 500 (AR 55-105).

[17] See Memo, CofT for Dir of Traf and Trans AAF, 23 Oct 42, OCT 500 (AR 55-105).

[18] Memo, CofT for ACofS G-1, 3 Dec 42; sub: Offs for Trans Sv of AAF, SPTDC 320.21, AG WDGAP 210.31 (11-27-42) AAF Traf Org.

where Air Forces and Transportation Corps field traffic offices were located in the same cities they should occupy adjoining quarters and that AAF district offices should be organized with a view to their ultimate absorption in the TC field establishment.[19] The personnel procurement objective of the Air Forces, which had contemplated the commissioning of 1,000 officers from civil life for the traffic organization, was curtailed. The Chief of Transportation issued instructions to his field offices late in December outlining the arrangement with the Air Forces and the relations which should be maintained between the two organizations, and corresponding AAF instructions were issued in mid-February.[20] Both instructions referred to the requirement that AAF and TC offices occupy adjoining quarters, but this objective fell short of complete attainment, in part because of the scarcity of office space in many cities.

In April 1943 the War Department Manpower Board took cognizance of the two traffic organizations functioning side by side, observed that this did not appear to be an "intelligent use of personnel," and suggested that the AAF transportation offices were "superfluous." [21] Responding to the board's request for an explanation, the Assistant Chief of Transportation for Operations, Brig. Gen. Robert H. Wylie, reviewed the circumstances leading up to the existing arrangement, restated the position taken by the Chief of Transportation during the preceding December, pointed out that AAF traffic constituted only about 7 percent of all carload traffic moving on War Department bills of lading, and stated that a thorough survey had revealed no AAF transportation problems which could not be handled by the TC field organization with the addition of only a fraction of the personnel proposed for the AAF district organization.[22] The War Department Manpower Board made further inquiry into the matter, but was informed by the Deputy Chief of Staff that he considered AAF control of transportation essential to the success of its procurement program, and accordingly the board decided that nothing more should be done toward changing the existing arrangement.[23]

A representative of G-4, who made an investigation in the Chicago area in the spring of 1945, reported that he saw no reason why the functions of the AAF district transportation offices could not be absorbed by the TC zone transportation organization.[24] No action was taken, however, to carry this suggestion into effect, and the separate transportation services continued throughout the war and the demobilization period.

General Gross never was satisfied with this arrangement. Although a high degree of co-operation was developed between the Transportation Corps and the AAF traffic and transportation organization under the direction of Col. Charles F. Nielsen, Gross believed that the division of responsibility was inconsistent with the principles of good

[19] Memo, Asst Secy WDGS for ACofS G-1, 20 Dec 42, AG WDGAP 210.31 (11-27-42) AAF Traf Org; Memo, CofS SOS for CofT, 21 Dec 42, ASF Hq CofS Trans.

[20] OCT Instructions 50-1, 26 Dec 42; AAF Memo 75-2, 17 Feb 43, sub: Estab of AAF Traf and Trans Contl Dists, OCT HB Topic AAF.

[21] Memo, Pres WDMB for CofT, 6 Apr 43, AG WDMB 523.5.

[22] Memo, ACofT for Pres WDMB, 24 Apr 43, sub: AAF Traf and Trans Org, AG WDMB 523.5.

[23] Memo, Pres WDMB for CG AAF, 27 Apr 43, sub: Traf and Trans Org; 1st Ind, CG AAF for Pres WDMB, 6 May 43; 2d Ind, Pres WDMB for CofT, 31 May 43. All in AG WDMB 523.5.

[24] Memo, G-4 Investigator (Henderson) for ACofS G-4, 12 May 45, sub: Trans Agencies in Chicago Area, AG WDGDS 320.2 Trans Unit.

traffic management. In January 1944, when summarizing for General Somervell the principal problems confronting his organization, he referred to the duplicating activities of the Army Service Forces and the Army Air Forces and remarked that in the interest of efficiency constant effort should be made toward the maximum unification of their supply procedures.[25] In his final report, prepared shortly after the termination of hostilities, the wartime Chief of Transportation, referring to this situation, stated: "Despite the good intentions of all parties, such a divided responsibility cannot exist without giving rise to inconsistencies and misunderstandings." Accordingly, he recommended that the arrangement be terminated as soon as conditions should make this possible.[26] The authority delegated to the Air Forces, it will be recalled, pertained only to domestic freight traffic, not to AAF domestic passenger traffic or AAF ocean traffic, which were under the control of the Chief of Transportation.

Additional Responsibilities

Establishment of the Transportation Service in March 1942 was regarded as merely a first step toward the fuller integration of Army transportation administration, although no master plan for later developments was then formulated. The process of integration was carried further when the Transportation Corps was created in July 1942, but there still were broad fields of surface transportation outside the jurisdiction of the Chief of Transportation, notably military railway services and military highway services. The former soon were added to his responsibilities, but the latter remained outside his purview until after the end of the war.

In April 1942, after discussion with the Chief of Engineers, the Chief of Transportation presented his views regarding military railways to General Somervell.[27] He stressed the advantage of having transportation functions centered in one agency and having the transportation organizations in oversea theaters parallel that in the zone of interior. He recognized, on the other hand, that the process of effecting such a change during wartime would involve temporary disadvantages, particularly in the field of procurement. Accordingly he recommended that responsibility for military railways be transferred from the Corps of Engineers to the Transportation Service, except construction and the procurement of railway equipment and supplies.

The Chief of Engineers did not concur in this proposal. He expressed the view that the railway activities of the Army were being carried on efficiently and expeditiously under the existing arrangement.[28] He pointed out, furthermore, that in the Corps of Engineers railway functions were distributed among many agencies and that the transfer of overhead personnel would involve considerable tearing down and welding together again, with a resulting loss of time. The Chief of Engineers submitted a memorandum from his Supply Division indicating that contracts for railway equipment already let or about to be let totaled approximately $100,000,000, and covered 572 locomotives and 5,800 cars of various types.

[25] Memo, CofT for CG ASF, 20 Jan 44, Item 22, OCT HB TC Gen Misc.

[26] Gross final rpt, p. 20.

[27] Memo, CofT for CG SOS, 30 Apr 42, OCT 020 Transfer of Functions.

[28] Ltr, CofEngrs to CG SOS, 1 May 42, OCT 020 Transfer of Functions.

General Somervell believed that further changes regarding transportation might be desirable, and as an aid to decision he sought advice from the theater point of view. In June 1942 he wrote to Dwight D. Eisenhower, Commanding General, United States Army in the European Theater of Operations, recalling the confusion that had existed in France during World War I because of frequent changes in the organization that handled transportation matters for the American Expeditionary Forces and because of the lack of understanding between the AEF and the War Department, and requested General Eisenhower's views as theater commander on two questions.[29] One was the question whether the operating personnel of the military railways should remain under the Chief of Engineers or be placed under the Chief of Transportation. In his response, General Eisenhower stated that he favored the latter arrangement, and strongly endorsed the principle of integration in transportation operations.[30] The other question, relating to motor transport, will be discussed later in this section.

The creation of the Transportation Corps on 31 July 1942 and the broader authority then assigned to the Chief of Transportation placed him in a better position to assume and perform added functions. His assumption of control over military railways was accomplished in two steps. In September 1942 the Transportation Corps was made responsible for operations and for maintenance of way and equipment.[31] Soon thereafter a recommendation that all activities in connection with military railways, except construction, be charged to the Chief of Transportation was placed before General Somervell and received his approval.[32] War Department action followed and the change became effective 16 November 1942.[33]

This action made the Chief of Transportation responsible for research, design, development, procurement, storage, and distribution in connection with all rolling stock and distinctive railway equipment for both military and utility railways; operation and maintenance of all railways previously assigned to the Corps of Engineers, both in the zone of the interior and in theaters of operation; activation, training, and assignment of all headquarters, operating, shop, and other troop organizations of the Military Railway Service; control of all funds, properties, and equipment pertaining to MRS. All civilian personnel engaged primarily in the activities of MRS was transferred to the Transportation Corps, and all officers primarily engaged in such activities were assigned to duty with the Transportation Corps. New construction for military and utility railways continued to be the responsibility of the Corps of Engineers.[34] The administrative problems involved in the transfer were simplified by arranging that personnel and facilities which had been utilized partly but not primarily for the military railways

[29] Memo, CG SOS for Eisenhower, 22 Jun 42, OCT HB Rail Div MRS.

[30] Memo, Eisenhower for Somervell, 27 Jun 42, sub: Contl and Opn of Trans, AG Adm 341 A (Opns Rpts).

[31] AR 100–50, par. 4, 1 Sep 42.

[32] Memo, CofS SOS for CG SOS, 26 Oct 42; Memo, CofS for CofT, 27 Oct 42. Both in OCT 020 Transfer of Functions.

[33] WD GO 60, 5 Nov 42, sub: Transfer of Activities and Functions Pertaining to Rys from CE to TC.

[34] AR 55–650, 27 Feb 43, stated responsibilities of TC and CE after this transfer. Generally speaking, military railways were in oversea commands and utility railways were for local operations at installations in the zone of interior.

and which consequently were to remain under the Chief of Engineers would continue to perform their railway functions until the Chief of Transportation should announce his readiness to take over such functions.[35]

The overhead personnel shifted from the Corps of Engineers to the Transportation Corps in connection with the transfer of railway responsibilities included 9 officers and 54 civilians from the Office of the Chief of Engineers and 94 civilian inspectors who had been employed in the field.[36] The Office of the Chief of Transportation, already short of personnel and suddenly confronted with the task of assuming a further heavy responsibility, claimed that additional civilians were subject to transfer, but the Chief of Engineers maintained that the provisions of the directive governing the change had been fulfilled.[37]

Pursuant to the directive, twenty-five military railway troop units, which had been activated or designated for activation by the Chief of Engineers, were transferred to the Transportation Corps. These included one headquarters and headquarters company, Military Railway Service; three headquarters and headquarters companies, railway grand division; eight railway operating battalions; three railway shop battalions; two railway diesel shop battalions; one railway transportation company; six railway track maintenance platoons; and one railway operating detachment.[38] At the time of the transfer all units were in the zone of interior except one diesel shop battalion, three track maintenance platoons, the transportation company, and the operating detachment, each of which had been dispatched to oversea stations.

Within a few weeks after the transfer had become effective the basic directive was modified in regard to maintenance responsibilities, and a few months later it was subjected to further modification and clarification.[39] The net result was that the Transportation Corps had responsibility for maintenance of equipment for both military and utility railways, except utility railways at certain installations.[40] The Transportation Corps also had responsibility for maintenance of way on military railways and on utility railways which were under the direct control of tactical commanders and to which units of the military railway service had been assigned. The Corps of Engineers had responsibility for maintenance of way on utility railways not maintained by the Transportation Corps, which for all practical purposes meant the utility railways in the zone of interior. The change regarding maintenance of way on utility railroads was made because the only personnel which the Transportation Corps had for this purpose was in units which were required for oversea service.[41]

It was necessary to determine, particularly for procurement purposes, where the

[35] Memo, CG SOS for CofEngrs, 4 Nov 42, OCT 020 Transfer of Functions.

[36] Memo for record, unsigned, 16 Dec 42; Office Memo 32, Civ Pers Br OCT, 11 Dec 42. Both in OCT 020 Transfer of Functions.

[37] Memo, CofT for CofEngrs, 26 Dec 42; 1st Ind, CofEngrs for CofT, 5 Jan 43. Both in OCT 020 Transfer of Functions.

[38] Memo, C of Mil Ry Br OCT for CofT, 19 Nov 42, sub: Situation Rpt on Ry Tr Units, OCT HB Rail Div MRS.

[39] WD GO 66, Sec. II, 9 Dec 42; WD GO 17, Sec. II, 2 Apr 43.

[40] See discussion of utility railroads in Ch. X.

[41] Memo, C of Adm Br Rail Div OCT for C of Rail Div, 16 Nov 42, OCT 020 Transfer of Functions; Note on intraoffice routing slip by Col R. H. Soule, Exec for Pers and Tng OCT, 1 Dec 42, AG 320.2 (11-4-42) GO 60.

dividing line lay between the construction of military railways, a responsibility of the Corps of Engineers, and maintenance of way, a responsibility of the Transportation Corps. This was accomplished by negotiation between the two services, which resulted in agreement that the Corps of Engineers would be responsible in connection with new construction and initial rehabilitation for procuring and installing track items (such as rails, ties, and switches), bridge and culvert materials, structures for shop use, structures for fuel and water supply, turntables, and heavy or fixed shop equipment; that the Corps of Engineers would procure and stockpile such of the above items as might be required by the Transportation Corps for the maintenance of military railways; and that the Transportation Corps would assist the Corps of Engineers in estimating the over-all requirement for such materials and equipment.[42]

Under the Chief of Engineers a headquarters for the Military Railway Service was maintained at Fort Snelling, Minn., with Brig. Gen. Carl R. Gray, Jr., as General Manager. Its primary function was to supervise the training of military railway troop units and to maintain relations with the commercial railroads under whose supervision the technical training of most of the units was being accomplished. Early in 1943 General Gray and his headquarters staff were moved to North Africa and he assumed responsibility for the military railways in that theater. Thereafter the Rail Division in the Office of the Chief of Transportation served as rear echelon for the military railway units which were overseas, and gave technical supervision to the organization and training of the units which were in the zone of interior. General supervision of the training of such units was assumed by the Military Training Division, OCT, and direct control of both military and technical training was assigned to the commander of the New Orleans Port of Embarkation.[43]

The disadvantage involved in transferring a major function after the beginning of hostilities was illustrated by the fact that eight months after the transfer of the Military Railway Service the Director of Railway Training for the Transportation Corps complained that certain elements of the Army had not taken cognizance of the new status of MRS. He reported that enlisted men who desired to serve with the military railways had been assigned to the Corps of Engineers in the belief that MRS still was a part of that organization. He reported further that, judging from communications received from enlisted men, some induction stations and reception centers were unaware that MRS existed. Confronted as he was with the problem of finding suitable personnel for an increasing number of railway troop units, the Director of Railway Training advocated that the basic directive be recirculated. The Adjutant General's Office demurred to this proposal and suggested that other means be utilized to disseminate information regarding the military railways to the local commands which seemed to require it.[44] The process of making the Chief of Transportation's need for experienced railroad men known throughout the field was a gradual one.

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[42] Memo, ACofEngrs for CofT, 16 Jan 43, sub: Procurement of Ry Equip; 1st Ind, ACofT for Supply for OCofEngrs, 6 Feb 43. Both in OCT 020 Transfer of Functions.

[43] Interv, author with Col J. A. Appleton, C of Rail Div OCT, 10 Apr 43, sub: MRS, OCT HB Rail Div MRS; OCT Cir 49, 5 Apr 43, sub: Tng of Ry Trs; OCT Cir 83, 28 Jun 43, same sub.

[44] Memo, Dir of Ry Tng for Rail Div OCT, 16 Jul 43; 2d Ind, AGO for CofT, 29 Jul 43. Both in OCT 020 Transfer of Functions.

The second question which General Somervell placed before General Eisenhower in June 1942 was whether motor transport should be withdrawn from the Quartermaster Corps and assigned to a new automotive corps. Eisenhower recommended that this be done, pointing out that the Quartermaster Corps already had very broad and diverse responsibilities.[45] It is evident that Somervell had in mind the possibility of establishing a new organization to handle motor transport, separate from both the Quartermaster Corps and the Transportation Service, as had been done in World War I. This arrangement was not consummated, however. The design and procurement of general purpose motor vehicles were transferred from the Quartermaster Corps to the Ordnance Department on 1 August 1942, and responsibility for the organization and training of motor transport troop units was left with the Quartermaster Corps. In September 1942 General Gross recommended to General Somervell that the latter responsibility be assigned to the newly established Transportation Corps, but the proposal was not adopted at that time and the question remained in abeyance until after V-J Day.[46]

General Gross brought the matter forward again in September 1945. Having in mind that motor transport troop units perform a necessary transportation function in theaters of operation and that many of them had been trained and utilized by the theater transportation officers, he said at a conference of his key officers, "I feel it is essential for us to go after the motor transportation end," and expressed the conviction that the theater commanders would support the change.[47] The negotiations to this end proceeded over a period of months and in July 1946 the War Department announced that headquarters and headquarters detachments for truck battalions, petroleum truck companies, troop truck companies, aviation truck companies, and certain related organizations were redesignated as Transportation Corps units, and directed that all officers then assigned to such units, except medical officers, be detailed in the Transportation Corps and that all enlisted men be transferred to that corps.[48] Thereafter all staff functions and technical responsibilities pertaining to such units and activities, including organization and training, were functions and responsibilities of the Chief of Transportation. Thus belatedly the military personnel for motor transport was brought under the same control as rail and water personnel and a further important step was taken toward the complete integration of Army transportation operations.[49]

The postwar effort to extend the Transportation Corps' responsibility to the realm of motor equipment was only partially successful. A proposal submitted in September 1946 by Maj. Gen. Edmond H. Leavey, Chief of Transportation, to transfer from the Ordnance Department to the Transportation Corps responsibility for research, design, development, procurement, storage, allocation, issue, and maintenance of general

[45] Memo for CG SOS, 27 Jun 42, sub: Contl and Opn of Trans, AG 500-G, AG Adm 341 A (Opns Rpts).

[46] Pencil Memo by Gross, initialed by Somervell, exact date not shown, sub: Reorg of Motor Transport, OCT 020 Transfer of Functions.

[47] Proceedings, Port and Zone Comdrs Conf, 27-28 Sep 45, p. 20, OCT HB TZ Gen.

[48] WD GO 77, 24 Jul 46, sub: Transfer of Certain Trans Functions.

[49] It will be recalled from discussion in Ch. II that following WW I, the C of Trans Sv strongly but unsuccessfully urged the establishment of a transportation corps which would control all forms of transportation including motor.

and special purpose wheeled vehicles was rejected by the War Department General Staff.[50] The proposal contemplated that the design, development, and procurement of tanks and other tracked mobile equipment would remain with the Ordnance Department, and the reason given for its rejection was that this arrangement "would result in a loss in economy in the distribution and use of common automotive supply items, in the use of maintenance equipment and installations, and in the utilization of services of supervisory and technical personnel." On the other hand, the Chief of Transportation succeeded in having his organization recognized as the proper authority for making "basic determinations of requirements" for administrative, line of communication, cargo, and personnel vehicles, and related equipment.[51]

The foregoing paragraphs relate particularly to motor transport troops and motor equipment for employment in the communication zones of theaters of operations. During the course of the war two important functions pertaining to highway transportation in the zone of interior were assigned to the Chief of Transportation. In June 1942 he was charged with the establishment and control of a pool of motor buses to be utilized in offsetting shortages of local commercial transportation in the vicinity of war industries and Army installations. In June 1945 he was charged with the assignment and control of administrative vehicles utilized by Army Service Forces installations.[52]

The control of Army air traffic, which General Gross had surrendered so reluctantly in July 1942, was restored to the Transportation Corps after the close of hostilities. In his conference with key personnel in September 1945, referred to above, Gross said: "Going still further, it [the Transportation Corps] should have control over air priorities both for passengers and freight. There should be a stronger integration in transportation than we have had in this war." [53] That objective was attained under his successor in December 1946, when the Chief of Transportation was designated the agency to administer priorities for the War Department (as distinguished from the theater commands) in connection with the oversea movement of personnel and cargo by the Air Transport Command, to authorize the use of commercial aircraft for oversea movements of personnel and cargo, to route domestic movements by commercial airlines when they involved 40 or more persons or 5,000 pounds or more of cargo, and to deal directly with the commercial airlines in arranging movements on a common carrier basis.[54] The Chief of Transportation was directed to place a movement control officer at each Army port of aerial embarkation in the United States, who would divert movements from air to rail or water, or vice versa, so as to accomplish the most expeditious delivery and the best utilization of military airlift, utilize commercial airlift in case military airlift should not be available,

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[50] Memo, Dir SS&P WDGS for CofT, 8 Oct 46, WDGSP/B1 255, sub: Transfer of Responsibility for Research, etc., of Motor Vehicles from OD to TC, OCT 451.

[51] WD Memo, 55-5-2, par. 1v, 14 May 47, sub: OCT Org and Functions.

[52] These developments are discussed in Ch. X.

[53] Proceedings, Port and Field Comdrs Conf, 27-28 Sep 45, p. 20. Theater chief transportation officers had been accorded movement control of nontactical air traffic by WD Cir 256, 16 Oct 43.

[54] WD Memo 55-750-1, par. 3, 16 Dec 46, sub: Air Trans; Conf, author with Lt Col W. A. Haggerty, C of Air Contl Br Mvmts Div OCT, 22 Jun 49, OCT HB Topic Air Trans Gen.

and co-ordinate the activities of ports of aerial embarkation and ports of water embarkation.[55] The Chief of Transportation also was made responsible for providing the War Department General Staff with the information and statistical data needed in determining allocations of space to theater commanders and the War Department, utilizing the airlift efficiently, and planning for future air transportation.[56]

The Headquarters Organization

Since transportation was a factor affecting many Army activities, both in the War Department and in the field, the Office of the Chief of Transportation functioned on a broad basis. It worked with the appropriate divisions of the General Staff and the Army Service Forces headquarters to insure that strategic and logistic plans, when finally adopted, were practical from a transportation standpoint. It translated those plans into terms of transportation capacity and control, and provided the installations, personnel, equipment, and procedures necessary to the proper execution of the transportation mission. It directly controlled the execution of such phases of the transportation mission as could be controlled most effectively from a central office and supervised the performance of such functions as had been delegated to field installations. It co-operated with the other technical services of the Army, with the Navy, the War Shipping Administration, and other federal agencies concerned with transportation, and with the carriers, to insure that movements of Army personnel and supplies were executed promptly and efficiently. It assisted oversea commanders by supplying personnel and equipment and developing techniques to aid them in the fulfillment of their many transportation responsibilities.

The headquarters organization which the Chief of Transportation built up to perform these functions was subject to many adjustments during the course of the war. Some adjustments were the result of changed or expanded responsibilities, while others represented attempts to improve an organization which had been put together hastily when the Transportation Service was formed in March 1942 by the merger of elements from G–4 and the Office of the Quartermaster General. Some improvements which were desirable from the standpoint of organization were not undertaken, because the practical benefits which reasonably could be expected did not seem to justify the risk involved in disturbing vital operations during wartime.[57] A general conception of the extent of these adjustments is gained by comparing Chart 1 which shows the organization of the Office of the Chief of Transportation as it was on 30 June 1942, just prior to the establishment of the Transportation Corps, with Chart 2 which shows the structure as it stood on 1 July 1945. Most of the organizational changes made between those dates were of a secondary nature, such as the realignment of staff divisions or changes within divisions, and these will be dealt with in the discussion of the activities with which they were involved.[58] At this point, therefore, only the

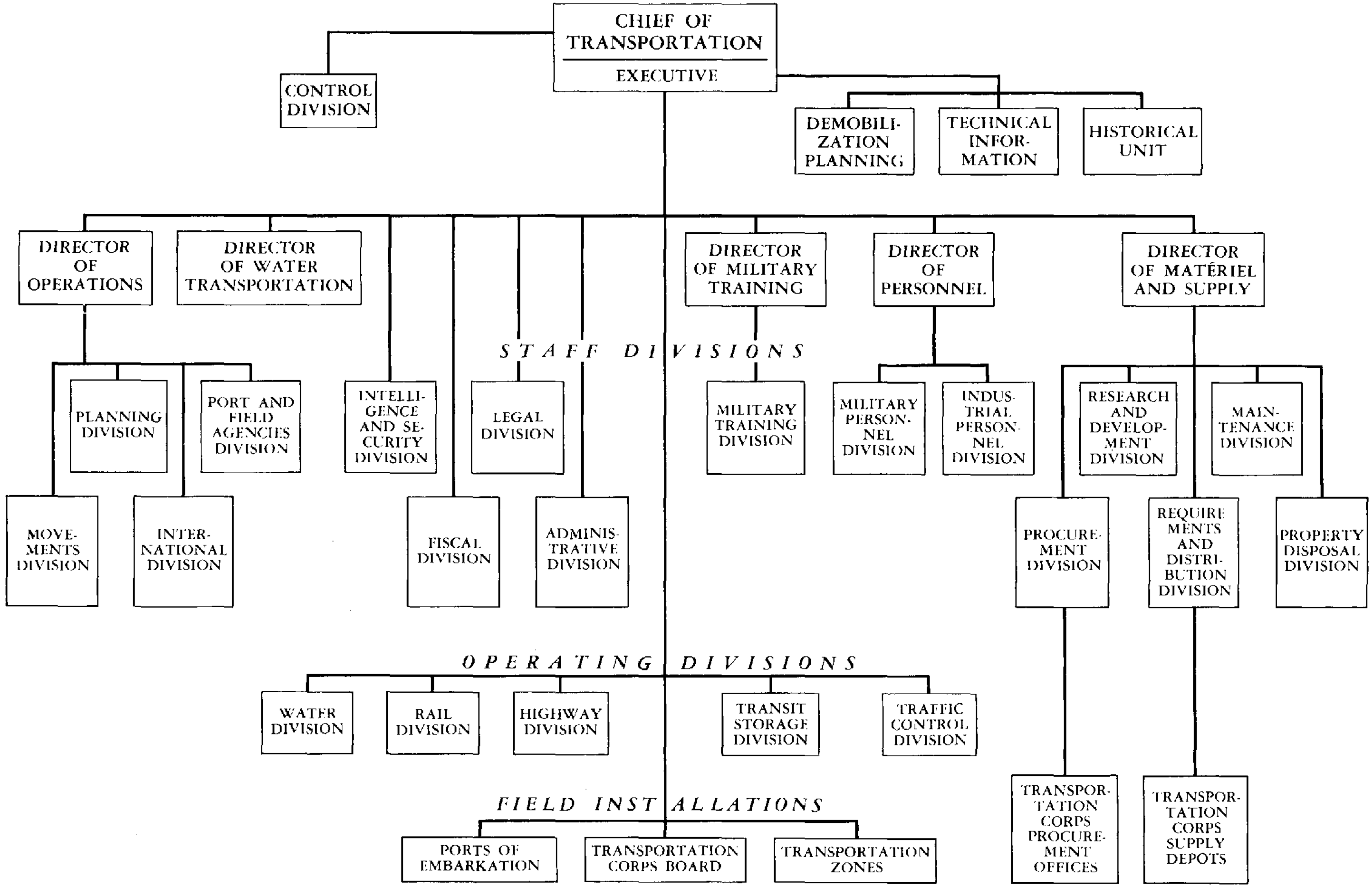
[55] Memo, TAG for CG AAF, CofT, etc., 27 Dec 46, sub: Mvmt Contl Offs at Ports of Aerial Emb, AGAM–PM 370.5 (26 Dec 46) WDGSP/Cl.

[56] WD Cir 53, Sec. I 4e, 25 Feb 47.

[57] Gross final rpt, p. 122.

[58] The basic document on functions and organization is TC Pamphlet 1, Org Manual, published in loose-leaf form, OCT HB TC Gen Org Manuals; see also Adm Log of the TC, 31 Jul 45, OCT HB TC Gen Rpts, which traces changes in organization and key personnel.

CHART 2—ORGANIZATION OF THE OFFICE OF THE CHIEF OF TRANSPORTATION: 1 JULY 1945



Source: Report of the Chief of Transportation, Army Service Forces, World War II, 30 November 1945, p. 123.

major changes which affected the principal supervisory offices are presented.

The first major change in the organization, as it existed when the Transportation Corps was created, was made in the late fall of 1942. Previously the staff divisions had been grouped under two supervisory officers, known initially as the operations officer and the executive officer and later as assistant chiefs of transportation for operations and for administration. At that time a third staff officer was added, because of the increased supply and training programs which resulted from assumption of responsibility for the military railways, and the staff divisions then were grouped under assistant chiefs of transportation for operations, for supply, and for personnel and training. The duties of the executive officer under this plan were confined to assisting the Chief of Transportation and the Deputy Chief with administrative matters.

In the summer of 1943 further major organizational changes were made, the last adjustments in the upper echelons during the war. In June of that year Brig. Gen. Theodore H. Dillon, Deputy Chief of Transportation, resigned from the Army because of ill health.[59] At about the same time Col. (later Brig. Gen.) Fremont B. Hodson, Assistant Chief of Transportation for Personnel and Training, was assigned to command the New Orleans Port of Embarkation. With the departure of these men, who had played important roles in the early development of the Transportation Corps, the offices which they had held were discontinued. The principal supervisory responsibilities thereafter were distributed among five directors—who dealt respectively with transportation operations, water transportation, the various aspects of supply, military training, and personnel—and the Executive Officer.[60]

The functions and relationships of the several directors, staff divisions, and operating divisions, as they existed in the late months of the war, are presented in some detail in Appendix A. These functions and relationships, moreover, will be discussed as occasion requires in subsequent chapters of this history. There are, however, certain aspects of the organizational arrangement in the Office of the Chief of Transportation which call for special comment at this point.

The Director of Operations was the co-ordinator for all transportation operations. The basic purpose of his office was to insure that troop and supply movements were executed promptly and according to plan. The task was an extremely complicated one since it involved, in addition to the co-ordination of the several OCT divisions and the TC field installations, constant collaboration with the Operations Division of the General Staff, various divisions of Army Service Forces headquarters, the oversea theater commanders, the Navy, the civilian agencies which were concerned with transportation, and the carriers. The Director of Operations throughout the war was Brig. Gen. Robert H. Wylie, a Regular Army officer who had had extensive experience with Army transportation as an officer of the Quartermaster Corps. General Wylie, although he worked very closely with the operating divisions during the war and co-ordinated their activities, did not direct

[59] See Memo, Gross for Somervell, 22 Mar 43, OCT HB Gross Offs and EM.

[60] There was lack of consistency during 1942–43 in using the terms Assistant Chief of Transportation and Director, but the term Director eventually was used uniformly to designate all officers in this echelon and the term Assistant Chief of Transportation was reserved for those directors who were general officers.

them. Soon after the close of hostilities he was given actual direction. In explanation, the Chief of Transportation stated that while it had not seemed wise to subordinate the wartime chiefs of the operating divisions to the Director of Operations because of their "stature" in the transportation field, that consideration no longer governed and the new arrangement was believed to be "the most effective solution to certain inefficiencies under the old organization." [61] These "inefficiencies" appear to have arisen from the fact that some of the chiefs of operating divisions, who were topflight transportation executives commissioned from civil life, did not always recognize the need for co-ordination, or took directly to the Chief of Transportation matters which might have been disposed of more readily by the Director of Operations.

The designation of a Director of Water Transportation in June 1943 was prompted by the increasing number of ocean-going transports and smaller boats in the service of the Transportation Corps and the many technical problems which were arising in connection with the construction, conversion, and operation of those vessels. While this officer had general supervision of all water transportation activities of the Transportation Corps, including the work of the Water Division, he was responsible more particularly for collaboration with the Maritime Commission, the Navy Department, and the various committees of the Joint Chiefs of Staff and the Combined Chiefs of Staff, in determining the types and designs of vessels to be constructed and in promoting other technical developments pertaining to floating equipment and port facilities. This latter activity covered a wide range of projects, some of which were carried to completion while others were discarded or were still being considered when hostilities ceased.[62] From its inception the office of Director of Water Transportation was held by Brig. Gen. (later Maj. Gen.) John M. Franklin, a veteran of World War I who was president of one of the larger American steamship companies at the time of our entry into World War II.

The functions performed by the other directors are fairly apparent from their titles. In the selection of men to fill these positions, experience as well as other qualifications was taken into account. Col. Harry A. Toulmin, Jr., the first Director of Matériel and Supply, had had experience with Army procurement during World War I and with various civilian engineering activities between the wars. Brig. Gen. Burton O. Lewis, who succeeded to this position early in 1944, had served previously as Chief of the Boston Ordnance District. Col. Frank C. Scofield, the first Director of Military Training, and Col. Geoffrey C. Bunting who succeeded him early in 1945, had been engaged in training activities in the Coast Artillery Corps. Col. Herbert B. Wilcox, prior to his designation as Director of Personnel, had been Chief of the Military Personnel Division in the Office of the Chief of Transportation. Col. Charles E. Martin, who became Director of Personnel in December 1944, had served previously as Chief of the Industrial Personnel Division, OCT, and before the war had specialized in industrial management as a civilian.

[61] Ltr, CofT to Brig Gen William J. Williamson (Ret), wartime C of Traf Contl Div OCT, 21 Feb 46, OCT 020 Org of TC; Ltr, Wylie to author, 10 Mar 50, OCT HB Dir of Opns.

[62] Memo, Asst to Dir of Water Trans for Exec Asst OCT, 22 Mar 44, OCT HB Dir of Water Trans.

The position of Executive Officer acquired added importance after the reorganization which took place in the summer of 1943. General Gross then was endeavoring to relieve himself as much as possible of the burdens of administration, and one means to that end was to assign additional responsibility to his Executive. Lt. Col. (later Col.) Luke W. Finlay, who assumed the position at that time, had been graduated from the U.S. Military Academy, had served for a period in the Corps of Engineers, and then had taken up a legal career in civil life. Gross and Finlay had worked together during earlier Army assignments and the mutual understanding that existed between them facilitated their wartime collaboration. As developed under Finlay, the duties of the Executive Officer included the co-ordination of matters involving two or more divisions which were not under the jurisdiction of a single director, the disposition of executive matters which in his judgment did not require the personal attention of the Chief of Transportation, the preparation of data bearing on matters requiring action by the Chief, and such special tasks as General Gross chose to assign to him.

The terms "staff divisions" and "operating divisions," as applied to the Office of the Chief of Transportation, were more convenient than they were accurate. To a large extent the work of the operating divisions consisted in supervision of the field installations and the carriers. The work of certain of the staff divisions gave them a direct and sometimes decisive influence on operations. The operating divisions, as will be observed from Chart 2, were set up to correspond to specific types of transportation or transportation functions. The staff organization, consisting of directors and divisions, paralleled to a large degree the organization of Army Service Forces headquarters. The latter arrangement simplified co-ordination between the OCT and ASF staffs, and was encouraged by General Somervell.

It is worthy of note that for a period the Office of the Chief of Transportation included a unit to deal with petroleum and petroleum products. During the early stages of the war the arrangements for handling these commodities on behalf of the armed services were not fully developed. Since liquid fuels and lubricants were essential to the operation of transportation equipment, and since the Chief of Transportation was responsible for their movement to the forces overseas (except bulk movements in tank vessels), General Gross soon after the establishment of his office set up a staff to study the subject. Its duties included the coordination of information on sources of supply and means of transportation, the translation of plans for troop movements into requirements for petroleum products, study of the problem of petroleum supply as it affected or might affect military transportation, and the development of procedures and instructions for the safe and expeditious handling of shipments at intransit storage depots and ports of embarkation.[63]

The Petroleum Branch attacked the problems assigned to it on a very broad basis, but soon found that to a considerable extent it was duplicating work done elsewhere.[64] The establishment of the Army-Navy Petroleum Board in July 1942, the increased attention given to this field by various headquarters divisions of the Army

[63] OCT Adm Memo 62, 16 Jun 42.

[64] Hist Rec, Petroleum Br, to 30 Jun 42, OCT HB Development and Liaison Div; Memo, Col John H. Leavell for CofT, 4 Mar 44, reviews some of his proposals as C of Petroleum Br and their results, OCT HB Gross Petroleum.

Service Forces, and the broadening of the responsibilities of The Quartermaster General relieved the Chief of Transportation of the necessity of pursuing the studies which he had launched, and in May 1943 the personnel of the Petroleum Branch was transferred to the Office of the Quartermaster General.[65] The responsibilities which remained with the Chief of Transportation related solely to the movement of fuels and lubricants in containers to oversea destinations, and the supervision of that activity was assigned to the Water Division.[66]

Although initially all personnel of the Office of the Chief of Transportation were located in Washington, toward the end of the war more than a third were working in other cities. The dispersion began in the spring of 1943 when a general effort was being made to move elements of the War Department away from Washington in order to relieve congestion in the Capital, and eventually substantial numbers of OCT personnel were located in New York and Cincinnati and a smaller number stationed at Baltimore.[67] This separation of personnel from headquarters had disadvantages from an administrative standpoint, but there also were some advantages. The location of the production staff of the supply organization in Cincinnati gave it access to a better market for technical workers than had been available in Washington. Units concerned with ship conversions and military baggage found New York a convenient base for their operations.

In the beginning of this chapter the statement is made that between 31 July 1942, when the Transportation Corps was established, and 30 June 1945, the total of the TC military personnel in the zone of interior and in the theaters, plus the other military personnel and civilian workers employed at TC installations in the zone of interior, increased more than 400 percent. During the same period the personnel of the Office of the Chief of Transportation increased about 80 percent, or from 1,714 to 3,070.[68] The largest group in the TC headquarters was the one concerned with the various aspects of supply, and it comprised about one-third of the total personnel. The Traffic Control Division, which dealt with all phases of Army traffic in the zone of interior, was next in size with over 600. The distribution of OCT personnel by locations and divisions in early 1945, on dates for which the data are available, is shown in Table 1.

The Chief of Transportation and His Policies

Although the personality and the policies of the Chief of Transportation are reflected throughout this history of the Transportation Corps, a brief summary at this point may help in the interpretation of developments.[69] Charles P. Gross was born in 1889. Graduated from Cornell University in 1910 and from the United States Military Academy in 1914, he was commissioned a second lieutenant in the Corps of Engineers and served with that organization until 1941. While with the American Expeditionary Forces in France during World War I, he

[65] ASF Adm Memo S-20, 20 Mar 43; ASF Cir 33, 26 May 43.

[66] OCT Office Order 5-15, 23 Jun 43.

[67] See Adm Log of the TC, 31 Jul 45, OCT HB TC Gen Rpts.

[68] Statistical Summary, TC, 15 Oct 42, p. 10, OCT HB MPR; Rpt, Dir of Pers OCT, Status of Pers, 30 Jun 45, OCT HB Dir of Pers, Pers Statistics.

[69] This section based partly on author's study of records of OCT and partly on his observations as a member of OCT executive staff.

TABLE 1—DISTRIBUTION OF PERSONNEL OF THE OFFICE OF THE CHIEF OF TRANSPORTATION: DESIGNATED DATES IN 1945

Location and Division	Total	Military	Civilian
In Washington (28 February 1945)	1,980	407	1,573
Office of the Chief	30	9	21
Office, Director of Operations	37	17	20
Director of Water Transportation and Water Division[a]	208	50	158
Director of Supply and Subordinate Divisions[b]	325	69	256
Traffic Control Division[a]	633	72	561
Rail Division	49	17	32
Highway Division[c]	11	6	5
Transit Storage Division[c]	5	3	2
Movements Division	41	15	26
Planning Division	19	10	9
Port and Field Agencies Division	20	10	10
International Division	15	5	10
Intelligence and Security Division[d]	21	10	11
Office, Director of Personnel	19	8	11
Military Personnel Division	47	17	30
Industrial Personnel Division[c]	104	9	95
Director of Military Training and Military Training Division	43	24	19
Control Division	44	20	24
Fiscal Division[e]	48	17	31
Legal Division[e]	36	11	25
Administrative Division	225	8	217
Outside Washington (31 March 1945)	1,133	164	969
New York	407	77	330
Cincinnati	726	87	639

[a] Personnel also in New York.
[b] Personnel also in New York and Cincinnati.
[c] All but the division chief and his executive staff was in New York.
[d] Personnel also in New York. Unit of Intelligence and Security Division located in Baltimore in April 1945.
[e] Personnel also in Cincinnati.

Source: Memo, CofT for CG ASF, 21 Mar 45; Rpt, TC Personnel, 31 Mar 45, by Dir of Pers OCT. Both in OCT HB Dir of Pers, Pers Statistics.

attained the temporary rank of colonel. His assignment between the wars included two tours of duty in Nicaragua in connection with the Nicaraguan Canal Survey and certain highway projects. Gross was designated chief of the Transportation Branch, G–4, War Department General Staff, in April 1941, Chief of Transportation when that office was created in March 1942, and commander of the Transportation Corps when it was established in July 1942. He attained the temporary rank of major general in August 1942.

Gross had a clear realization of the importance of efficient transportation in the accomplishment of the military mission. He repeatedly importuned the members of his staff that they never lose a "sense of urgency" in the performance of their duties; never overlook a detail that might contribute to the prompt and safe movement of troops and supplies, or might facilitate the procurement of transportation equipment or the training of transportation personnel. He pointed out that a faltering transportation system would adversely affect every other phase of the Army's operations, in the zone of interior and overseas.

The full integration of Army transportation was a cardinal point of doctrine with General Gross. The dispersion of transportation responsibility was in his opinion a source of weakness. Integration implied that all nontactical transportation for the Army should be under the control of a single agency and that the control should extend unbroken from the points where troop and supply movements originated in the zone of interior to the oversea discharge ports. Such integration involved not only the establishment of policies and procedures by a single headquarters in Washington, but actual direction by that headquarters of the field installations necessary to carry those policies and procedures into effect. As earlier discussion has shown, the Chief of Transportation's ideas regarding integration were largely but not completely realized during the war.

General Gross believed that, although control of the transportation resources of the nation was vested by the President in civilian agencies, the armed forces should have first claim on those resources to the extent that they were needed for the accomplishment of approved military objectives, and that nonessential civilian transportation services should be curtailed or eliminated when that was necessary in order to meet the military requirements. In his effort to make this view effective he took issue with the civilian agencies from time to time on their interpretation of what constituted essential civilian services.

The extremely critical position of shipping because of heavy losses through submarine activity and constantly mounting military requirements was emphasized by General Gross from the beginning. "Shipping is the key to the war effort," he said repeatedly; therefore he cast his influence in support of the maximum construction program for merchant vessels consistent with the requirements of other military programs and urged that the available bottoms be utilized with the greatest possible efficiency. He was strongly of the opinion that his responsibility for keeping the oversea forces properly supplied, with the use of the minimum amount of shipping, could be fulfilled best if the vessels for this purpose were placed under his control, and he was not content with the situation which required him to move a large part of the Army's supplies for the Pacific Ocean Areas in vessels controlled by the Navy.

The Chief of Transportation had a high sense of his responsibility to the theater commanders, not only for the prompt delivery of troops and maintenance supplies but also for the provision of transportation troop units properly organized and trained for the performance of their functions and transportation equipment properly designed for the type of service that would be required of it. He urged his staff to be "immediately responsive" to theater needs. This meant anticipating the needs insofar as possible and acting promptly when the requests were received. An Oversea Operations Group was set up in his office, which had for its sole purpose the expeditious processing of requests from overseas and the coordination of the efforts of the several divisions which were required to act on them. Gross made a number of visits to the active theaters in order to better understand their problems and to impress upon them the readiness of his organization to be of service. He arranged for his principal assistants to make similar trips.

Because of the great emphasis which General Gross placed on the maintenance of close relations with the theaters, it is worth while to present his doctrine in his own words. On the occasion of the second anniversary of the Transportation Corps he said: "Above all, we have had to be immediately responsive to the needs of the theater commanders. Tactical requirements vary widely with the theaters; they change within the theaters as the point of attack moves forward from one area to another. Always, they have an urgency that dominates all our efforts. Whether backing MacArthur in the Southwest Pacific, Stilwell in China and India, Devers in Italy or Eisenhower in France, we must be flexible and fast. All this lends fascination and excitement to our job. It gives us a sense of nearness to the theater commanders and a keener appreciation of the vital importance of our role." [70]

Adequate officer personnel, qualitatively and quantitatively, was a constant problem and one to which General Gross gave much personal attention. The fact that the Chief of Transportation's organization was a wartime creation and was required to expand rapidly as hostilities progressed, meant that key positions had to be filled by assignments from other services or by drafts on the civilian transportation industries. After the United States had entered the war the chiefs of the other services naturally were reluctant to part with good officers, and the Chief of Transportation was forced to turn almost entirely to the ranks of industry to build up the staffs of his own office and the field installations. In this he was handicapped by lack of advance planning such as the older services had been privileged to do and by wartime personnel ceilings.

When, as the forces began moving overseas, the theater and base commanders began calling on the Chief of Transportation for experienced men to build up their transportation organizations, Gross considered it his duty to fill these requests to the best of his ability. Sometimes the men were taken directly from industry, but often they were transferred from stations under his command. While willing to give up good men to the theaters, Gross was careful not to denude his own organization of competent leadership. He did not hesitate to deny the requests of oversea commanders for specific officers whom he considered irreplaceable in the jobs which they were doing. In the early part of the war he also stood firm against the requests of some of his key of-

[70] Remarks, 31 Jul 44, OCT HB TC Gen Misc.

ficers who desired to leave desk jobs for field commands. Before the close of hostilities, however, General Gross arranged for many of his officers to receive oversea assignments in order that their experience might be broadened.

In the use of his key personnel Gross was guided by one consideration—results. When an officer did not measure up to his assignment, he was relieved. On one occasion he was heard to say to an officer who was protesting his removal from a port command, that unless he (Gross) was free to employ personnel as he considered best, he did not want the responsibility of heading the Transportation Corps. While the commanders of Transportation Corps installations were allowed broad latitude in carrying out the policies established at headquarters, disregard of those policies was not tolerated.

A significant side light on the Chief of Transportation's personnel policy is seen in the fact that after the termination of hostilities in Europe the commander of the New York Port of Embarkation, who had been eminently successful in supporting the European theater, was transferred to the command of the San Francisco Port of Embarkation so that he might bring the benefit of his experience to bear on the operations against Japan—this notwithstanding the fact that the officer transferred from San Francisco was considered a successful port commander. Although intensely loyal to his staff, Gross tried to subordinate sentiment and personal preference to military considerations. He remarked to one of his senior officers, in the discussion of a matter which involved personal preferences, that if they could not decide the question on its merits they were getting too old for the Army.

While believing strongly that the control of transportation should be centralized, General Gross decentralized his operating responsibilities insofar as practical. He vested a large amount of operating authority in the ports of embarkation and the transportation zones in order to relieve the operating divisions of his own office, but he saw limits beyond which decentralization was not feasible. He refused, for example, to sanction a proposal to establish "a superior headquarters" on the Pacific coast to supervise the ports of embarkation in that area, since that would have introduced an additional and unnecessary echelon. He was unwilling to delegate to a joint committee of Army, Navy, and War Shipping Administration representatives at San Francisco the authority to make allocations of shipping to the various services in the Pacific, since that function had broad policy implications and therefore could be best performed by the headquarters organizations in Washington.

Although he delegated his authority freely, General Gross kept the affairs of his organization under close observation. He expected his Control Division to provide information regarding the progress of the work, and particularly any phases of it that seemed to be lagging. Under normal circumstances he held a group conference with the key members of his staff once each week, at which time he informed them of matters that had been decided or were under consideration by Army Service Forces headquarters or the General Staff. These meetings also enabled his directors and division chiefs to exchange information regarding their problems and to co-ordinate their operations. Except for these meetings, which became less frequent toward the end of the war, he called in his assistants only

as their attention to specific matters was required. It was generally understood, however, that his door was always open to them when they desired his counsel. Gross was friendly but direct in his manner; he was objective in his approach to problems, and he appreciated similar tactics on the part of his assistants.

The strong conviction which he held regarding the necessity for an efficient Army transportation service, and the acute problems which he encountered as the head of a war-born organization, made Gross a strong advocate of placing the Transportation Corps on a permanent basis. This he considered necessary in order that a staff of competent transportation officers might always be available as the nucleus of a wartime organization, and that that organization might have a recognized place in the military establishment. A permanent Transportation Corps was considered desirable also in order that comprehensive planning might be pursued and transportation equipment and methods developed to match the technological developments in other branches of military service. During the fall of 1943 the Special Planning Division of the War Department Special Staff prepared a study looking to the perpetuation of the Transportation Corps.[71] When the study was presented to General Gross for concurrence some months later, he expressed complete agreement with the conclusion that the war had demonstrated the need for a permanent Transportation Corps, but suggested that it would be premature to request the necessary legislation at that time and that such a request should be part of a more comprehensive proposal for the reorganization of the Army following the termination of hostilities.[72] That course of action was adopted as the more practical.[73]

Relations with Other Elements of the Army Service Forces

Since effective transportation planning and operations were vital to the smooth execution of the troop and supply programs of the Army Service Forces, the Chief of Transportation functioned to a degree as a member of the ASF headquarters staff, as well as a technical service chief. This being so, his relationship with the commanding general of the Army Service Forces was of special significance. It was in all respects a cordial and co-operative association. Generals Somervell and Gross had been classmates at the Military Academy. Both were engineers by training. They saw eye to eye on the proposition that transportation was an essential and at the same time a highly critical item in our military potential. To be sure, Somervell, because of the broad range of his responsibilities, sometimes had to moderate his opinion regarding the quantity of transportation equipment to be produced, in order that other essential military requirements might be met. Basically, however, he and Gross were together in the conviction that for a successful prosecution of the war adequate transportation was a *sine qua non.*

[71] See data prepared in OCT in Oct 43, at request of SPD WDGS, sub: Historical and Other Information Bearing upon Proposal to Establish Permanent TC, OCT HB TC Gen Postwar Plng.

[72] Memo, CofT for Dir SPD WDGS, 1 Mar 44, sub: Estab of TC on Permanent Basis, OCT 321.

[73] In Jan 46, in order to allay uneasiness among personnel due to temporary status of TC, CofT obtained from CofS USA statement that WD favored and would seek establishment of permanent TC. Memo, C of T for Pres WD Bd to Study Org, 7 Jan 46, sub: Recommendations under Reorg Act of 1945, OCT 321; OCT Misc Ltr 26, 8 Feb 46, sub: Continuation of TC, OCT HB TC Gen Postwar Plng; WD Cir 218, Sec. IV, 20 Jul 46.

Because of the importance which he attached to the results, Somervell took an active hand in high-level negotiations with the other government agencies concerned with transportation, such as the Navy with which the Army had constant dealings on both the policy and the operating levels, the War Shipping Administration which controlled the major portion of the American merchant marine, and the Office of Defense Transportation which regulated the inland carriers. He participated in the discussion of matters of broad logistical significance which were being considered by the Joint and Combined Military Transportation Committees, on which he and Gross were the War Department representatives. Somervell sometimes entered into the negotiations with the Association of American Railroads on matters of exceptional importance. The communications on such matters, which were signed by Somervell or forwarded by him to the Secretary of War, the Under Secretary, or the Chief of Staff for signature, usually were prepared by the Chief of Transportation or his principal assistants. Sometimes these communications were modified by General Somervell; frequently they were signed as submitted. It naturally is impossible to judge how far the policies which the communications enunciated had been formulated by Somervell or Gross, or had been arrived at jointly. It is clear, however, that the premises upon which the policies were based usually were developed in the Office of the Chief of Transportation.

Somervell kept current transportation operations under close observation. From his vantage point as head of the Army's supply organization and a close collaborator with the Chief of Staff, he could foresee many of the demands which future military operations would make on transportation, and he issued instructions to insure that adequate preparations were made for meeting them. During his visits to the theaters of operation he took note of transportation problems and deficiencies and directed that means be found for coping with them.[74] He had the monthly progress reports dealing with transportation carefully analyzed and called upon the Chief of Transportation for explanations of conditions which from the statistics appeared unsatisfactory or dubious. Such communications covered a wide range of points. For example, a memorandum to Gross regarding the report for February 1943 raised questions about the turnaround time of ships in the service to North Africa, the marked increase in the number of special trains being used for troop movements, the length of time freight cars were held for unloading at ports of embarkation, the high percentage of unused warehouse space under the control of the Transportation Corps, and the failure of deliveries of certain items of transportation equipment to approach the forecast. The Chief of Transportation's replies to such inquiries, in addition to explaining the circumstances, stated the actions being taken to correct unsatisfactory conditions.[75]

The constant pressure which Somervell placed on Gross in regard to matters general and specific reflected the technique of his administration rather than a lack of confidence in the transportation organization. This is evident from a letter which he wrote

[74] See file, Somervell Trip to Africa (Jan–Feb 43), OCT HB Exec; see also file, Somervell's Trip to Theaters Oct–Nov 43, OCT HB Theaters Gen.

[75] See Memo, CG ASF to CofT, 23 Mar 43, and reply, 31 Mar 43, with atchd statement relating to points mentioned, OCT 319.1 MPR.

in connection with the second anniversary of the establishment of the Transportation Corps. Saluting Gross as "Dear Charlie," he said in part, "I feel that the second birthday of the Transportation Corps should not pass without my indicating to you informally my appreciation of the magnificent job that you, your immediate staff, and all the officers and enlisted personnel of the Transportation Corps have done in the past year." Addressing his reply to "Dear Bill," Gross said, "Your thoughtfulness in remembering our anniversary will quicken our determination to measure up in full to every assignment and expectation." [76]

Even while General Gross was striving to bring under his control functions assigned to other services, which he felt properly belonged to the Transportation Corps, he was under the necessity of combating efforts by other elements of the Army Service Forces to withdraw functions from his jurisdiction. Reference has been made to the unsuccessful attempt of the ASF Director of Operations to absorb the Chief of Transportation's Planning Division. The difficulty, however, was chiefly in the field. There was a sentiment in some quarters that the ports of embarkation and the transportation zones should be under the control of the service commands, rather than exempted stations under the Chief of Transportation. Even after these basic issues had been decided in favor of the Chief of Transportation he did not have clear sailing. A considerable period was required to establish proper working relations between some of the service commanders and the corresponding zone transportation officers. Again, it was argued that the holding and reconsignment points performed essentially a storage function and should be under service command control. Efforts were made to transfer such important activities as the co-ordination of oversea supply and the staging of troops from the control of the commanders of the ports of embarkation. The firm stand which General Gross took in these matters was supported by General Somervell and by his chief of staff, General Styer. On the other hand, certain unit training centers utilized by the Transportation Corps were placed under the operating control of the service commands contrary to the desires of the Chief of Transportation.

The relationship between the corresponding divisions in the Office of the Chief of Transportation and Army Service Forces headquarters were close. The necessity for thorough co-operation was fully recognized by General Gross and his aides, since transportation affected many phases of the ASF responsibility. They believed, however, that the ASF divisions should confine themselves to staff work, and they sometimes chafed under what they considered unwarranted intrusions into operations. Gross took the position that once plans had been approved by ASF headquarters and the War Department General Staff, and after his organization had been given a technical task to perform, the Transportation Corps should be wholly responsible for the execution of that task and free to act without interference. The objection to interference was particularly strong with reference to the execution of troop and supply movements, in which case it was felt that the ASF Director of Operations was endeavoring to interpose his office between the Chief of Transportation and the Operations Division of the General Staff, and in so doing was assuming technical transportation functions which did

[76] Ltr, Somervell to Gross, 2 Aug 44, and reply, 4 Aug 44, ASF Hq Trans 1944.

not properly belong to his office and could not be performed properly by it.[77]

In an earlier chapter it was stated that before and during the early part of the war it was necessary to take vigorous steps to prevent other technical services from disregarding the established transportation prerogatives in their efforts to expedite the movement of their supplies and personnel. This ceased to be a problem after the Transportation Corps became well established. There remained, however, the problem of obtaining full compliance at technical service installations with the sound transportation practices which the Chief of Transportation had undertaken to set up. The Traffic Control Division, referring chiefly to movements by rail, pointed out that since the Transportation Corps operated on the same level of authority as the other technical services, the only means it had of enforcing its standards in such matters as the loading and discharging of cars, the documentation of shipments, and the use of intransit rates, was by persuasion or by obtaining directives from Army Service Forces headquarters. The division indicated that either method was time-consuming, since it frequently involved convincing officers regarding technical matters concerning which they had no practical knowledge.[78]

Gross had a large degree of freedom in the organization and management of his office after the initial structure had been established. From time to time, however, ASF headquarters made its influence strongly felt. As has been indicated, that headquarters desired that the Chief of Transportation's staff divisions be organized to parallel its own divisions in order to simplify the processes of co-ordination. The ASF Control Division was constantly engaged in studying the organizations and methods of the technical services and recommending improvements to General Somervell. Gross was fully convinced of the value of the control function as conceived by Somervell, and readily followed the ASF behest to establish corresponding divisions in his own headquarters and principal field installations. On the other hand, it sometimes was felt in the Office of the Chief of Transportation that the ASF Control Division's recommendations missed the mark because they were not based on an adequate understanding of transportation techniques and that the necessity of analyzing and rebutting them added an unwarranted burden to the already heavy duties of the Chief of Transportation and his assistants. Gross cleared with Somervell before making assignments and reassignments affecting the more important transportation positions, but only one instance has come to the author's attention in which a key figure in the Transportation Corps was relieved at the insistence of ASF headquarters and against the convictions of the Chief of Transportation.

After the establishment of the Services of Supply in March 1942 the Under Secretary did not take an active part in the management of transportation, but his interest in that aspect of logistics continued. In the fall of 1942 he appointed Col. James H. Graham (Ret.) as special consultant to keep him informed on transportation matters.[79] Graham already had placed himself

[77] Gross final rpt, p. 125; see also Memo, Exec OCT (Finlay) for Dir of Opns OCT (Wylie), 26 Oct 43, sub: Establishment of Trans Co-ordination Sec, OCT HB Exec Staybacks.

[78] See Memo, C of Gen Sv Br Traf Contl Div OCT for C of Traf Contl Div, 25 Sep 45, sub: Rpt on Accomplishments and Handicaps, OCT HB Traf Contl Div. Gen.

[79] See Ltr, USW to Graham, 12 Sep 45, OCT HB Gross–Graham.

informally at the disposal of General Somervell, with whom he had been associated in World War I. He had a keen interest in transportation and a strong desire to help the Transportation Corps fulfill its mission. He had observed the transportation failures of 1917–18 and was eager to avoid a repetition of them. The files disclose many informal observations by Graham on the progress and problems of the Transportation Corps, and some reports on conditions and projects which apparently were made at Somervell's request. During the periods when he was in Washington, Graham visited Gross in his office almost daily and discussed transportation developments at length. He soon became convinced of Gross's ability to administer the heavy task that had been assigned to him, and while Gross was still a brigadier general, Graham recommended to Somervell that the Chief of Transportation should have rank equal to that of the chiefs of the other technical services.[80] Probably the greatest service he performed was to impress upon all with whom he came in contact the desirability of an integrated transportation service—the centralization of all transportation functions under the control of one agency.[81]

Relations with the Oversea Commands

The relations of the Chief of Transportation in Washington with the oversea commands can be grouped into two broad categories: (1) those incident to the delivery of combat and service troops and matériel to oversea ports to meet theater requirements, and (2) those incident to helping the oversea commanders to build up their port operations and their intratheater lines of communication so that men and supplies would move in orderly fashion from shipside to camps and dumps and thence eventually to the combat areas. The importance of these functions to the successful conduct of military operations is obvious. The emphasis which General Gross placed on the responsiveness of his organization to the theater commanders' needs was therefore basic to the successful performance of his task.

In building up close working relationships with the theaters, Gross found the newness of the Transportation Corps a handicap. During a trip to various theaters in the fall of 1943, which began in the South Pacific, he observed that the corps was "hardly known" at the various bases.[82] Along with this general observation, he noted that officers were unable to obtain Transportation Corps insignia and that ship's manifests and other official documents still bore the inscription of the Quartermaster Corps. Gross instructed his headquarters to take immediate steps to correct these conditions and to find means of gaining recognition for the Transportation Corps in the oversea commands. These objectives were accomplished only gradually, and less rapidly in some theaters than in others.

Failure of some oversea commanders to establish proper transportation organizations and to give them adequate authority was another handicap which General Gross encountered. This not only affected the efficiency of theater transportation operations, but it rendered more difficult the cooperation of the Chief of Transportation in Washington with the chief transportation officers overseas. Although the preoccupa-

[80] Memo, handwritten and undated but evidently written about 1 Jul 42, ASF Hq Trans 1942.

[81] See Memo, Graham for Somervell, 13 Oct 42, OCT HB Gross–Graham.

[82] Memo, Gross for Wylie, 20 Sep 43, OCT HB Wylie Ltrs from Gross.

tion of the theater commanders with purely military matters was a factor, basically this defect was traceable to the Army field service regulations, which were not modified promptly to embrace the concept of an integrated transportation service such as had been established in the zone of interior. The field service regulations in effect when most theater organizations were taking shape stated that water transportation was a responsibility of the Quartermaster Corps, rail transportation a responsibility of the Chief Engineer, motor transportation the responsibility of a Motor Transport Service (which had no counterpart in the zone of interior), inland waterway transportation a responsibility of the Corps of Engineers, and air transportation a responsibility of the Air Corps, while the co-ordination of the several means of transportation and the provision of a plan for controlling traffic were responsibilities of G-4 of the headquarters commanding the area.[83] With this archaic doctrine still in circulation, it is not surprising that, despite the personal efforts of Generals Somervell and Gross to make their views known to the oversea commanders, the arrangements in the theaters for dealing with transportation and traffic were divergent and in some cases unsatisfactory.

Gross took early cognizance of the need for a revision of the field service regulations, but was handicapped in proposing changes by the fact that his own organization was in a state of flux both as regards functions and structure.[84] Even after the establishment of the Transportation Corps the process of change was slow, and the first revision, published in October 1943, was not wholly adequate. This directive, which dealt broadly with the reorganization of corps headquarters and organic troops, was developed in the General Staff and Army Service Forces headquarters, and the section pertaining to transportation failed to deal with some of the problems which had been claiming the attention of the Chief of Transportation.[85] It recognized the theater transportation service as including the Office of the Chief of Transportation, the Military Railway Service, the Motor Transport Service, the Inland Waterway Service, and the Coastwise Transportation Service, and it provided that theater air transport, insofar as it was a nontactical means of transportation, should function under the operational (movement) control of the theater chief of transportation. The basic fault of the directive was its failure to state explicitly the place of the theater chief of transportation in the theater organization and to establish safeguards against his being subordinated to other theater agencies or handicapped by lack of control over transportation in the base sections.

The drawbacks experienced by transportation officers in the respective theaters will be discussed in detail in the third volume of Transportation Corps history, but in order to illustrate the problem brief statements regarding three major commands are incorporated here. In the North African Theater of Operations, later known as the Mediterranean theater, the Allied Forces headquarters, the U.S. Army headquarters, and the U.S. Army Services of Supply each had a transportation organization. The confusion which might have resulted from this

[83] FM 100-10, Field Service Regulations, Administration, 9 Dec 40, pars. 32, 105, 106, 123, 132; see Gross final rpt, p. 73.

[84] Memo, Opns Off OCT for Tng Br, 3 May 43, sub: Revision of FM 100-10, SPTSA 461-A (FM 100-10), OCT HB Wylie Staybacks.

[85] WD Cir 256, 16 Oct 43, sub: Reorg of Corps Hq and Organic Trs, par. 17; see file AG 322 (10 Aug 43) (20) for concurrences.

duplication fortunately was avoided by the designation of the same officer to head the transportation staffs of NATOUSA and SOS NATOUSA, and to serve as U.S. Chief of Transportation for AFHQ, in which position he was co-ordinate with a British transportation officer.[86] Another arrangement in that theater which General Gross considered basically unsound was making the manager of the Military Railway Service responsible directly to the theater commander rather than to the Chief of Transportation, but there again the difficulties which might have resulted from this organizational weakness were avoided through the harmonious co-operation of the officials concerned.[87]

In the European theater, despite the evident desire of General Eisenhower to have a strong centralized transportation service, the Chief of Transportation was greatly handicapped for a period following the invasion of the Continent by a lack of clear differentiation between his functions and those of G–4 of the communications zone, and the latter's exercise of control in transportation matters.[88] Eventually, and largely through the intervention of General Gross, this difficulty was overcome.

In the Southwest Pacific, transportation administration was handicapped by a dispersion of authority and frequent reorganizations. The Chief of Transportation in the U.S. Army Services of Supply (at times called the Chief Transportation Officer) was a permanent institution, but for a period in 1943 he was subordinate to a Chief of Transportation in U.S. Army headquarters, and from late 1943 until near the end of the war he was overshadowed by a Chief Regulating Officer in the theater General Headquarters, who exercised a broad control over all traffic and transportation.[89]

The chiefs of transportation in the larger and more active theaters experienced varied degrees of difficulty in co-ordinating transportation in the base sections with over-all theater requirements, because of the independent position of base section commanders. This problem arose in connection with both the operation of ports and the distribution of rail and motor equipment.

Wholly adequate doctrine to govern theater transportation was not published by the Army until after the war was over. In 1944 the Chief of Transportation initiated studies in the several theaters with a view to formulating regulations which would give the oversea transportation officers the scope and the authority which they needed to properly perform their tasks. The result of these studies was a manual dealing solely with transportation, published in December 1945.[90] This manual stated that the theater chief of transportation was a chief of service and as such was responsible to the commander of the communications zone or the services of supply, if such an organization existed; that he also was the special staff officer for transportation on the staff of the theater commander, concerned with policy and planning; that he was the traffic man-

[86] Gross final rpt, p. 74; OCT HB Monograph 17, p. 106, and Monograph 29, p. 299.

[87] Ltr, Gross to Brig Gen George C. Stewart Trans Off SOLOC ETO, 5 Dec 44, OCT HB Gross Day File.

[88] See OCT HB Monograph 29, pp. 243, 377; Hist Rpt of TC in ETO, Vol. V, Pt. 1, Ch. 2, p. 6, OCT HB ETO.

[89] Ltr, Gen Stewart CofT AFWESPAC to Gross, 30 Aug 45, and reply, 17 Sep 45, OCT HB SWPA Misc; see also Monograph, James R. Masterson, U.S. Army Transportation in the Southwest Pacific Area, 1941–1947, Ch. XV, OCT HB Monographs.

[90] FM 55–6, Military Transportation Service in Theater of Operations.

ager for the theater and the chief operating officer for carrying out approved plans and policies; that in addition to operating the military railway, highway, inland waterway, and coastwise transportation services in the communications zone, he had movement control over nontactical theater air transport and shipments of petroleum products by pipeline; and that he was responsible for establishing transportation offices in the territorial subdivisions of the communications zone, such as base, intermediate, and advance sections. Thus the theater transportation officer belatedly was assured of a suitable position in the theater organization and was vested with adequate authority to enable him to control the utilization of all the means of nontactical transportation and to co-ordinate transportation operations so as to obtain the best results for the theater as a whole.

Reference was made earlier in this chapter to the Chief of Transportation's efforts to provide the theaters with sufficient competent transportation officers. This was a responsibility which General Somervell emphasized after a visit to the North African theater early in 1943, and one which General Gross considered germane to his position.[91] The personnel furnished ranged from second lieutenants for minor administrative jobs to experienced executives to fill key positions. Although the selection of officers to head their transportation organizations was entirely the prerogative of the oversea commanders, they normally requested the assistance of General Gross, or he volunteered advice when circumstances warranted.[92] As the war progressed the more difficult problem was to find a sufficient number of experienced men for the intermediate and lower echelons of the expanding theater transportation organizations. During 1944, because of the heavy requirements in Europe, the Mediterranean, and the Pacific, the Chief of Transportation stated that his organization was practically stripped of such personnel, and that the best remaining material was the graduates of the officer candidate school and men who had gained some shipping experience as cargo security officers on transports.[93] The domestic transportation industries also had virtually dried up as sources of such personnel, because of the increasingly heavy traffic which they were required to move and the general shortage of manpower.

In assigning shipping to move men and matériel from the zone of interior to the oversea commands, the Chief of Transportation had to keep in mind the desirability not only of providing a sufficient number of vessels to meet the requirements, but also of avoiding the dispatch of a greater number than could be handled properly at the oversea ports. The latter problem concerned

[91] Memo, Somervell for Gross, 19 Feb 43, par. (7), OCT HB Exec Somervell Trip to Africa (Jan–Feb 43); Memo, CofT for port comdrs and port agencies, 1 Dec 42, sub: Tng of Senior Off, OCT HB PE Gen Tng.

[92] Memo, Gross for Maj Gen J. C. H. Lee CG SOS USAFBI, 7 May 42, sub: SOS BOLERO Trans Sv, OCT HB Gross Day File; Ltr, ACofT to Maj Gen S. B. Buckner, Jr., CG Alaska Def Comd, 2 Feb 43, OCT HB Wylie Alaska; Ltr, CG ASF to Maj Gen James L. Frink CG SOS SWPA, dictated by Gross, 17 Jun 44; Ltr, Gross to Brig Gen T. F. Farrell Comdg Cons Sv CBI, 10 Jul 44. Last two in OCT HB Gross Offs and EM.

[93] Ltr, ACofT to Maj Gen Ralph Royce CG USAFIME, 23 Jan 44; Ltr, Gross to Col F. M. Fogle Trans Off Intermediate Sec Oro Bay SWPA, 10 Aug 44, OCT HB Wylie Staybacks. Rail and Water Divisions of certain PE's had complete turnovers of officer personnel within six months and CofT sent as many as 250 officers overseas in one month. See Min, Port and Zone Conf, 6–9 Jul 44, pers mtg, 8 Jul, p. 14, OCT HB PE Gen Port Comdrs Conf.

movements of supplies and equipment rather than movements of troops. An effort was made by the Chief of Transportation's Water Division to have on hand at all times up-to-date information regarding docking facilities, cargo handling equipment, and harbor craft available at oversea ports, the facilities for clearing cargo from the docks after it had been discharged, and the general conditions prevailing at the terminals. His Control Division received radio reports from the theaters and prepared reports showing the relative efficiency of the oversea ports. Nevertheless, Army officials in the zone of interior were guided largely by the views of the theater commanders as to their capacity to receive supplies, and in 1944 serious port congestion developed in a number of major theaters and many ships were idle for weeks because they could not be discharged promptly. In addition to being too optimistic regarding their ability to discharge the vessels, General Gross believed that the active theaters, in their desire to take all possible precautions against shortages, requested supplies for delivery farther in advance of the actual need than was requisite.[94]

From January 1942 control of the movement of maintenance supplies to the theaters was assigned to the ports of embarkation, which maintained large oversea supply divisions to perform this function. These divisions were in daily contact with the theaters for which they were responsible, using radio, telegraph, and teletype for the purpose. Adjustments in the amounts or types of supplies to be shipped in response to theater requisitions and changes in shipping dates were discussed, and arrangements were agreed upon which would best meet the theater need. Radiograms summarizing the supplies on board were sent immediately after each sailing so that plans could be made for the docking and discharge of the ships, and cargo manifests and stowage plans were forwarded to the theaters by air mail to assist them in unloading and distributing the cargoes. The ports of embarkation also exercised final supervision over the packing and marking of shipments, in order to minimize damage in transit and insure that after arrival overseas the supplies would reach the services for which they were intended. The Chief of Transportation believed that vesting control of the movement of maintenance supplies in the zone of interior port commanders, who also controlled the terminals and the loading of the ships, was the best method of giving the theaters an adequate and well-regulated supply service.[95]

In moving combat and service troops to the oversea commands the Chief of Transportation endeavored to have the units as nearly at full strength as possible, with complete individual equipment, before they were embarked. Basically this was the responsibility of the stations of origin, but in practice, particularly during the early part of the war, many shortages were found when the troops arrived at the port staging areas, which had to be made up between that date and the day of sailing. Also during this period men who were physically or mentally unfit were eliminated, training deficiencies were overcome insofar as possible, and instructions were given to prepare the troops for the voyage and for debarkation. The Chief of Transportation also endeavored to have organizational equipment reach the theaters before or at the same time as the troops, and in condition for immediate use. This proved to be an intricate

[94] See Gross final rpt, p. 125.

[95] *Ibid.*, pp. 56–59, 125.

problem, as will be more fully explained in the discussion of oversea troop movements, but great progress was made during the course of the war. General Gross was strongly of the opinion that having the staging areas under the control of the port commanders, who also controlled arrivals of troops at the ports and their embarkations, was the best way to effect orderly movements and to insure that units arrived overseas in good condition.[96] The ports of embarkation maintained direct contact with the theaters regarding troop movements and kept them informed as to the units and the organizational equipment shipped on each vessel.

With respect to lines of communication in the theaters, the task of the Chief of Transportation, aside from providing key administrative personnel, was mainly that of supplying equipment and troop units for the operation of transportation services. As indicated earlier in this chapter, that responsibility did not rest wholly with the Chief of Transportation. During the first year of the war he was concerned only with the requirements of the theaters for port and water operations. Then the military railways were brought within his sphere. At no time during the war was he responsible for providing motor equipment or motor troops to the theaters, although his Highway Division through expert advice did much to improve over-the-road vehicles and highway operations. The Army Air Forces provided the matériel and the personnel for air services. The Corps of Engineers installed and operated pipelines, a form of transportation which became prominent in certain theaters where large quantities of liquid fuel had to be moved inland in support of advancing troops.

[96] *Ibid.*, p. 45.

The principal oversea ports at which troops and cargoes were discharged were operated under military direction to insure uninterrupted work, control of movement, and the observation of security regulations. Insofar as practical, native longshore labor was employed to supplement military personnel, but at many ports utilized by the Army the civilian labor force was inadequate or inefficient, or both, and in some instances, as where new ports were created, trained longshore gangs were nonexistent. The theaters' need for troop labor was therefore heavy. Before the reorganization of the War Department in March 1942, troops for the operation of oversea ports were trained at ports of embarkation in the zone of interior, and The Quartermaster General was responsible for tables of organization and for training doctrine. The training activity came under the supervision of the Chief of Transportation in March 1942, and the responsibility for organization and doctrine was transferred to him in July 1942. At that time there were two types of port units, one known as headquarters and headquarters company and the other as port battalion. The former constituted the supervisory staff and the latter the labor force. With the rapid expansion of oversea activities, the Chief of Transportation found it necessary to develop three types of headquarters organizations—headquarters and headquarters companies for major and for medium ports, and headquarters and headquarters detachments for smaller ports. Also it was found advantageous to train port companies as such rather than as components of port battalions, so that they would be more self-sufficient and flexible. All changes affecting these organizations were made as the result of consultation with the theaters and consideration of their experi-

ence and prospective needs. This was true also of the equipment assigned to the units, and the Chief of Transportation endeavored to supply them with cranes, forklift trucks, and other gear suitable to their requirements and adequate to enable them to function efficiently.[97]

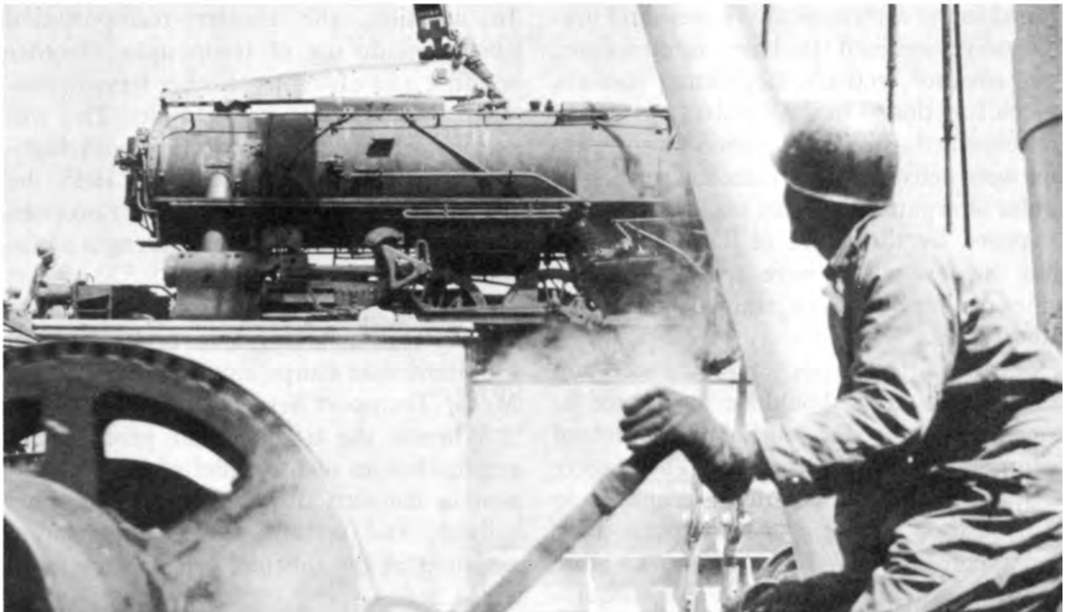
The Chief of Transportation provided vessels and crews for water transport in the oversea commands. As regards the larger types of vessels, his task was to arrange that the required numbers be made available by the War Shipping Administration and the Navy. As regards smaller vessels for harbor, coastwise, and inland waterway services—that is, vessels of less than 200 feet length and 1,000 tons gross—the Chief of Transportation directly procured such craft and sent them to the theaters to supplement vessels which could be procured locally. He established tables of organization and equipment for and trained several types of marine troop units for service in the theaters— harbor craft companies to man the smaller types of vessels, marine maintenance companies to operate shops on shore at oversea ports, and marine ship repair companies to man specially equipped repair ships which were moved from port to port. He had similar responsibilities with respect to amphibian truck companies to operate and maintain the 2½-ton Ordnance-procured amphibious trucks which were used extensively overseas for harbor work and in assault operations. The composition of troop units and the designs of vessels were developed on the basis of reports received from the theaters.

After the Chief of Transportation had been assigned full responsibility for the Military Railway Service (except construction) in November 1942, provision had to be made to meet the heavy requirements for equipment and troops to conduct the Army's oversea railway operations, especially those in North Africa, Italy, Continental Europe, Iran, and India. Different types of locomotives were needed in the several areas, and many types and gauges of cars were required.[98] The principal types of railway troop units were the headquarters and headquarters company, military railway service, which supervised operations and maintenance in areas of major importance and corresponded to the office of the general manager of a large American railroad; the headquarters and headquarters company, railway grand division, which was a supervisory and administrative organization corresponding to the office of the general superintendent on an American railroad; the railway operating battalion, which was adequate to operate and maintain up to 150 miles of right of way; and the railway shop battalion, which was staffed and equipped to make heavy repairs. Other specialized types of units were found to be necessary or advantageous as the war progressed and experience accumulated. Here again, the Chief of Transportation maintained close liaison with the theaters and worked out with them the changes in the organization and training of railway troops and the design of railway equipment which experience proved to be desirable.

The density of traffic in the more active theaters necessitated a systematic plan of traffic regulation to insure that movements

[97] Fuller discussion of training troops and procuring equipment and supplies will appear in another volume of TC history. Preliminary data may be found in Gross final rpt, Secs. V and VI, and in OCT HB Monographs 26 and 28.

[98] In addition to rail equipment for U.S. Army, locomotives and cars were procured and shipped to allied nations under lend-lease.



PERSONNEL OF MILITARY RAILWAY SERVICE *operating European equipment at Naples, Italy, October 1943 (top). An American-built locomotive being delivered at Cherbourg, France, August 1944 (bottom). MRS rehabilitated and operated railways in theaters of operations.*

were effected in an orderly manner, so as to avoid delays to troops and supplies and obtain optimum service from transportation equipment. The need for such regulation was felt first in connection with highway traffic in the North African theater, where it was provided initially by improvisation.[99] Foreseeing that similar regulation would be required for railway, inland water, and air traffic, the Chief of Transportation developed the organization and the training doctrine for units to perform this work. These traffic regulation units consisted of several types of teams trained to deal with the respective types of traffic. Those which received their military and basic technical training in the zone of interior completed their technical training overseas. Many were activated in the theaters because of the urgent need. Traffic regulation units functioned in the communications zone and usually were assigned to base, intermediate, and advance sections. Regulating stations, which functioned in the combat zone, were not classified as Transportation Corps units but were activated and trained according to tables of organization and training doctrine prepared by the Chief of Transportation, and the few which were activated in the zone of interior were trained under his supervision.

Several other types of Transportation Corps troop units should be mentioned as contributions to the efficient conduct of transportation in the theaters. The staging area company was organized primarily to provide mess service at oversea ports. Base depot companies were organized to store and distribute Transportation Corps equipment and supplies in the theaters. Floating spare part depots, two of which were activated and trained during the late months of the war, were for the operation of floating depots to deliver marine and rail spare parts at ports in the Pacific where shore depots had not been established. A composite table of organization was devised embracing more than sixty small teams of technicians trained to work in the several transportation fields. These teams could be utilized separately in cases where larger units would have been excessive, or in combination with other teams or units. This table of organization enabled the theater transportation officers to select teams of skilled workmen to meet a wide variety of requirements, and it also simplified the Chief of Transportation's task of providing the skills needed.

The Transportation Corps units which were overseas on 31 March 1945 aggregated 195,193 officers and enlisted men.[100] In addition, the theater transportation officers made use of troop units of other services, and of troops of other services provisionally organized as TC units. This was particularly true in connection with highway operations. On 26 March 1945 the Chief of Transportation in the European theater stated that the actual strength of the units serving under him was 159,532 officers and enlisted men, of which 92,476 were in Transportation Corps units and 67,056 in Quartermaster Corps units serving with the Motor Transport Service.[101]

Whereas the training and procurement responsibilities of the Chief of Transportation in connection with the port, marine, railway, and certain other transportation activities in the theaters will be dealt with

[99] See OCT HB Monograph 9, pp. 269–73.

[100] Rpt, STM–30, Strength of the Army, 1 Apr 45, p. 28.

[101] TC ETO Weekly News Ltr, 26 Mar 45, OCT HB ETO. At that time more than 9,000 TC troops were assigned to base sections and were performing work other than transportation.

rather fully in another volume of Transportation Corps history, such is not the case with respect to motor equipment and motor troop units, since he had no responsibilities in those directions. General Gross was deeply interested in such troops and equipment, however, because the theater chiefs of transportation utilized them extensively in their highway transport services, and the influence which he was able to exercise in both fields was considerable. It is in order, therefore, to include here a brief review of his activities in connection with highway transport in the theaters. Unfortunately his influence, which had to be exercised through persuasion rather than authority, was slow in taking effect and was not felt overseas until the war was well progressed.

The requirements of a highway transport service in the communications zone of a theater, corresponding to the Military Railway Service, had not been visualized properly when we entered World War II.[102] It had been assumed that the general purpose vehicles which were developed for use as organic equipment would serve satisfactorily for over-the-road operations. Early in the war the highway experts on the staff of the Chief of Transportation pointed out that this was not the case, and that the 2½ ton 6x6 truck, which was the vehicle chiefly relied on, was far from efficient as a means of moving large tonnages over the highways. Studies were initiated to demonstrate that trucks of larger capacity, and especially tractor-trailer combinations, would save operating personnel and equipment and relieve road congestion.[103] The time required to propagate this doctrine among the military authorities, together with production lags, meant that the better vehicles did not arrive in the theaters in substantial quantities until the summer of 1944, and that the numbers desired for such strategic operations as the Red Ball, ABC, and XYZ motor express routes in the European theater were not available.[104] Nevertheless, the cargo carriers that were delivered overseas, especially to Italy, to France, and to India for operation over the Stilwell Road into China, were of great value to those theaters.

While endeavoring to have more suitable vehicles provided for oversea highway operations, the Chief of Transportation promoted tests to demonstrate the ability of standard Army trucks to carry more than their rated capacities. Those capacities had been established for off-the-road operation and it was readily proved that for movements over surfaced roads the vehicles could lift heavier loads without undue wear or strain. As a result, the War Department in May 1944 authorized overloads when the vehicles were employed on good highways.[105] For example, the 2½-ton 6x6 truck was permitted to carry up to five tons. The larger permissible loads effected a great saving in equipment and manpower. The tests, performed under supervision of the Ordnance Department, also demonstrated that the 2½-ton truck, even when carrying an overload, could haul a 4-wheel trailer with up to 6½ tons payload. The Chief of Transportation had developed a trailer for use in

[102] Gross final rpt, p. 83; Rpt, Hwy Trans in Supply Opns, by Hwy Div OCT, 28 Sep 44, OCT HB Hwy Div Rpts.

[103] See Rpts, Strategic Studies Br Hwy Div OCT, 17 Jun 44, Sec. IV, and 18 Jun 45, Sec. V, OCT HB Hwy Div Strategic Studies.

[104] Memo, C of Hwy Div OCT for CofT, 9 Oct 45, sub: Rpt on Accomplishments and Handicaps, par. 3b, OCT HB Hwy Div Rpts.

[105] *Ibid.*, par. 1a; WD Cir 212, Sec. IV, 29 May 44, and WD Cir 255, Sec. IX, 22 Aug 45; Rpt by Hwy Div OCT, Tests of Efficient Loading Practices and Related Operating Characteristics for Army Cargo Vehicles, 30 Sep 44, OCT HB Hwy Div Cargo Vehicles.

HARD GOING ON OVERSEA HIGHWAYS. *Trucks stalled in the mud on Okinawa waiting to be towed by bulldozers (top). Convoy en route to China slowed down by repairs on the Burma Road (bottom).*

this manner, but it was not put in production because of the urgent need for other types of vehicles for highway transport, especially in the European theater.[106]

The importance which highway transportation assumed in the North African campaign and in other oversea areas necessitated a large degree of improvisation by theater transportation officers, with the result that theater operating practices were completely out of line with published doctrine. Proposals for revision of the doctrine were made by the Chief of Transportation in the summer of 1943, and these were partially incorporated in War Department directives issued later that year; further recommendations were adopted subsequently.

After making a careful canvass of the several theaters, the Chief of Transportation proposed tables of organization and equipment for the newly recognized Highway Transport Service. Efforts to justify these tables were continued through 1944 and until their publication was authorized in May 1945.[107] Representatives of the Chief of Transportation conferred with representatives of The Quartermaster General, as well as theater transportation officers, regarding new tables of organization and equipment for quartermaster truck companies, made necessary by the introduction of new types of vehicles and new operating methods.

The Chief of Transportation was called on by Army Service Forces headquarters and the War Department General Staff for estimates of the capabilities of highways in oversea areas, and studies of this nature were made covering large portions of Europe, North Africa, the Middle East, and the Far East.[108] These studies undertook to establish the maximum tonnages of military supplies that could be accommodated on a given road during a given period, usually a day or a month. Account had to be taken not only of the character of the highways and the vehicles, but also the volume of tactical and other essential traffic likely to be moving on the same highways. Similar studies were made to determine the capability of streets and highways to clear from the ports matériel which had been discharged from ships. The data developed were of value for strategic as well as logistic planning. Lack of information that might have been collected during peacetime and the difficulty of assembling facts during wartime, especially for areas held by the enemy, were serious handicaps in this work.

The emphasis which General Gross placed on the maintenance of close working relations with the theaters brought progressively better results. In the beginning it was an uphill effort in which good intentions were pitted against adverse conditions—the scarcity of shipping, the lack of adequate procedures for oversea movements, the backwardness of the Transportation Corps' procurement and training programs because of the corps' recent establishment, the lack of authority over some transportation activities, and the unsatisfactory status of the transportation organizations in some theaters. The year 1943, however, witnessed

[106] Conf, author with Maj D. K. Chacey, 20 May 49, OCT HB Hwy Div Cargo Vehicles. Maj Chacey served with Hwy Div during the war and at time of this conference was C of Engineering and Logistics Br Hwy Transport Sv Div OCT.

[107] Rpts, Strategic Studies Br Hwy Div OCT, 17 Jun 44, pp. 14–16, 18 Jun 45, pp. 10–12, and Incl 11, OCT HB Hwy Div Strategic Studies; T/O&E 55–402T, TC Hq and Hq Co, Hwy Transport Sv, 7 May 45.

[108] Rpt, Strategic Studies Br, 17 Jun 44, pp. 6–11, and Incls, which include copies of rpts on studies, OCT HB Hwy Div Strategic Studies.

definite improvement, which was apparent in the support of the campaigns in North Africa, Sicily, and Italy. The improvement continued during 1944 and 1945 and was clearly manifest in the latter stages of the build-up of strength in the United Kingdom, the support of the armies in their rapid advance across France into Germany, and the preparations in the Pacific for the final thrust against Japan. The evidence of this progress will be seen as the various aspects of the corps' activities are presented. The problems which limited progress in certain fields will also be examined.

CHAPTER IV

The Field Establishment

The field installations which the Chief of Transportation maintained in the zone of interior may be grouped into three categories: first, the ports of embarkation, which dealt primarily with ocean transportation and which had existed in peacetime, though on a modest scale; second, the various types of wartime installations which functioned under the control of the zone transportation officers and dealt chiefly with inland transportation, procurement, and storage; third, other field activities which did not fall into either of the above categories and which also had been set up after hostilities began.

These field installations were the agencies through which the policies and procedures established by the Chief of Transportation were given effect in day-to-day operations, and by which he kept in touch with general conditions affecting transportation and procurement. The latter function is worthy of emphasis, for in these two major aspects of his work—transportation and procurement—the Chief of Transportation was largely dependent on private industries in the performance of his mission, and General Gross sought to forestall interruption of service in those industries by keeping informed regarding shortages of manpower and materials or theatened labor difficulties and using the influence of his office to prevent such conditions from becoming acute.

While the numerous field installations which the Chief of Transportation maintained were on the one hand an expression of his policy of decentralizing operating responsibility, they were on the other hand an essential factor in carrying out his doctrine of integration in the control of Army transportation. Such integration implied continuous control by the Chief of Transportation over the movement of troops and supplies from their points of origin in the zone of interior to the oversea discharge ports where they were transferred to the theater and base commanders. General Gross stoutly opposed the arguments which were presented from time to time for the divorcement of certain activities from his field establishment, because the continuity of his control would have been broken thereby.

Ports of Embarkation

An Army port of embarkation is a highly complex institution, especially during wartime. It is far more than a shipping terminal. This fact is at once evident from the regulation which defined the responsibilities of the port commander. It read in part:

> The commanding officer of a port of embarkation will be responsible for and will have authority over all activities at the port, the reception, supply, transportation, embarkation, and debarkation of troops, and the receipt, storage, and transportation of supplies. He will see that the ships furnished him are properly fitted out for the purpose for which they are intended; he will supervise the operation and maintenance of military traffic between his port and the oversea base or bases; he will command all troops assigned

to the port and its component parts, including troops being staged, and will be responsible for the efficient and economical direction of their operations. He will be responsible for the furnishing of necessary instructions to individuals and organizations embarked or debarked at the port . . . . He will be responsible for taking the necessary measures to insure the smooth and orderly flow of troops and supplies through the port.[1]

A port of embarkation is a military command with jurisdiction over the shipping, storing, staging, and other facilities necessary to the performance of its mission, most of which lie within the geographic limits of a municipality. Ports of embarkation within the continental limits of the United States were under the command of the Chief of Transportation in World War II. Although ports in areas outside the United States ordinarily were under the command of theater commanders, the regulation provided that the War Department might place such ports under the control of the Chief of Transportation, and this was done in the case of certain Canadian and Alaskan ports.

The term "port of embarkation" has been used loosely to designate all port installations under the command of the Chief of Transportation, but more precisely such installations were of three types. Strictly speaking, *ports of embarkation* were installations which performed all or most of the Army's port functions and handled both passenger and freight traffic. *Subports of embarkation* were operated under the supervision of ports of embarkation, and in practice they were of less importance from the standpoint of volume of traffic and variety of activities. *Cargo ports of embarkation* also were operated under the supervision of ports of embarkation, and were set up to handle cargo primarily. By placing subports and cargo ports under the supervision of the larger ports of embarkation, a saving was made in overhead personnel, while at the same time the smaller installations were given the benefit of expert direction. The regulations also provided for *mobile ports of embarkation,* which were troop units organized primarily to operate oversea ports but which were sometimes used at domestic ports prior to assignment to the theaters.

On the Atlantic seaboard, at the outbreak of war in September 1939, the Army was operating one port of embarkation, located at New York. During the ensuing two years of preparatory rearmament, a port of embarkation was established at New Orleans and a subport at Charleston, S. C.[2] The New Orleans installation was set up primarily to handle traffic with the Panama Canal Department, but its wartime activities covered a much broader field, including shipments to Caribbean, South Atlantic, and Pacific bases. The subport at Charleston, which was under the jurisdiction of the New York Port of Embarkation, was established primarily to relieve the latter of some of the growing traffic with the West Indies and Caribbean bases, but it also served a variety of interests during the war. After the United States became a belligerent, Charleston was made a full port of embarkation, and additional ports of embarkation were installed at Boston and Hampton Roads. Cargo ports were set up at Philadelphia and Baltimore, operating under the supervision of New York and

[1] AR 55-75, par. 2b, 1 Jun 44. This discussion relates to ports of water embarkation. Ports of aerial embarkation were under the command of CG AAF.

[2] Copies of documents regarding new Army ports and reports of activities at all ports are in OCT HB files pertaining to respective ports.

Hampton Roads, respectively.[3] A subport of the New Orleans Port of Embarkation was operated for a period at Mobile. Ports subordinate to the Boston Port of Embarkation were installed at Providence, R. I., Searsport, Maine, Halifax, Nova Scotia, and Quebec and Montreal, Quebec. The subport at Providence functioned only briefly in the early part of the war. The Searsport cargo port was set up just prior to the invasion of the European Continent, particularly to load ammunition and explosives. The Canadian subports were not steadily active and handled only limited amounts of traffic.[4]

On the Pacific coast the only Army port installation in operation in September 1939 was at San Francisco. During 1940 the quartermaster depot at Seattle was expanded to handle the growing traffic with Alaska, and in 1941 a subport was established there. After our entry into the war, Seattle became an independent port of embarkation; a subport was established at Los Angeles under the jurisdiction of San Francisco, which later became an independent port of embarkation; a subport was set up at Portland, which retained that status throughout the war and functioned under the supervision first of San Francisco and then Seattle; subports to operate under the supervision of Seattle were set up at Prince Rupert, British Columbia, and at the Alaskan ports of Juneau, Excursion Inlet, and Skagway. The installation at Prince Rupert was established for the dual purpose of lessening the load on the port of Seattle and the railroads serving it and of shortening the sea route to Alaska. The installations at Juneau and Skagway served as discharge points for traffic destined to Army posts in those areas and as transshipment points for freight destined to more distant parts of Alaska. The Excursion Inlet subport was set up solely as a transshipment facility. Juneau, Excursion Inlet, and Skagway served as northern terminals for a barge line which the Transportation Corps operated out of Seattle and Prince Rupert over the inside passage, for the purpose of reducing the demand for deepwater ships in the Alaska service. Skagway passed from the control of the Chief of Transportation to that of the Northwest Service Command in the summer of 1943. Excursion Inlet became of decreasing importance after the Japanese threat to Alaska had passed, and the installation was inactivated before the close of hostilities.

The establishment of additional independent port installations on the Atlantic seaboard met with no opposition on the part of the commander of the New York Port of Embarkation. The port commander at San Francisco, on the other hand, believed that all port activities on the Pacific coast should be under his control. In July 1942 he presented arguments, though unsuccessfully, for operating Seattle, which had been given independent status, as a subport of San Francisco.[5] In the spring of 1943, with Los Angeles and Portland functioning as subports of San Francisco but being considered

[3] Initially these cargo ports were under control of Dist Trans Off at Philadelphia and 3d ZTO at Baltimore. This was altered to afford the cargo ports the benefit of close integration with and technical supervision by NYPE and HRPE. See memo, AGSPX 323.3 (8 Sep 43) OB-I-SPTOF-M, 13 Sep 43, AG 323.3; Ltr, CofT for 3d ZTO, 22 Nov 42, OCT HB Gross TZ's.

[4] TC mobile port organization was stationed at Churchill, Manitoba, during the summer of 1942 to transship troops and matériel to northern air bases. See Memo, CofT for CO of 12th port, 15 Jul 42, OCT 323.3 Churchill. It operated under command of CofT in Washington.

[5] Ltr, CG SFPE to CofT, 8 Jul 42, with atchd memo, 4 Jul 42, OCT 323.91 San Francisco.

WARTIME ARMY PORTS OF EMBARKATION. *The Oakland Army Base, Calif., an Army-owned facility of the San Francisco Port of Embarkation (top). Leased facilities at Newport News, Va., operated by the Hampton Roads Port of Embarkation (bottom).*

for independent status, the commander of the San Francisco Port of Embarkation proposed that his headquarters be designated headquarters for all U.S. Pacific coast ports except Seattle. His plan was to give the two installations in the San Francisco Bay area (Fort Mason and the Oakland Army Base) and the installations at Los Angeles and Portland equal status as operating agencies under a single command. This he believed would allow greater flexibility in transportation and supply matters, and would help to allay jealousies between the cities in regard to their proportionate shares of Army traffic. The Chief of Transportation did not approve this plan; he pointed out that the trend in Transportation Corps organization was toward decentralization.[6] As already indicated, Los Angeles eventually was given independent status as a port of embarkation, and Portland was placed under the supervision of Seattle because of its proximity to the latter port and the heavy traffic which San Francisco was required to handle. Thereafter the commander of the San Francisco Port of Embarkation commanded only the Army port installations in the San Francisco Bay area.

At the close of the war the Transportation Corps was operating eight ports of embarkation, three cargo ports, and two subports, through which traffic was being moved regularly to oversea destinations. The relative importance of the thirteen installations, as measured by the number of passengers and the tons of cargo embarked during the period December 1941–August 1945, inclusive, is shown in the following tabulation:[7]

[6] Ltr, CG SFPE to CofT, 14 Apr 43; Ltr, CofT to CG SFPE, 19 Apr 43. Both in OCT 323.91 San Francisco.

[7] Gross final rpt, p. 59. Traffic of subports which were closed before V-J Day was relatively light and is included in traffic of ports of embarkation to which they were responsible. The small numbers of passengers embarked at cargo ports are included in the figures for the respective ports of embarkation.

Port	*Number of Passengers*	*Measurement Tons of Cargo*
All Ports	7,293,354	126,787,875
Boston Port of Embarkation	740,705	8,927,363
Searsport Cargo Port	–	470,584
New York Port of Embarkation	3,172,778	37,799,966
Philadelphia Cargo Port	–	5,893,199
Hampton Roads Port of Embarkation	725,880	12,521,868
Baltimore Cargo Port	–	6,504,029
Charleston Port of Embarkation	35,495	3,215,981
New Orleans Port of Embarkation	166,696	7,240,687
Los Angeles Port of Embarkation	188,270	8,644,847
San Francisco Port of Embarkation	1,657,509	22,735,244
Seattle Port of Embarkation	523,290	10,204,760
Portland Subport	51,827	1,689,075
Prince Rupert Subport	30,904	940,272

For the handling of this large traffic and the performance of related functions the Army utilized both owned and leased facilities. At the beginning of the emergency the government-owned properties included the large Army bases at Boston, Brooklyn, Newark, Philadelphia, Newport News, Charleston, and New Orleans, all of which had been projected during World War I, and the smaller terminal at Fort Mason, San Francisco.[8] While the public and privately owned terminals on the Atlantic and Gulf coasts were considered adequate, the shipping facilities on the Pacific coast were a cause of concern. Accordingly, early in 1941 the Army acquired terminal properties at Oakland and Seattle and immediately began to improve them. Later, when establishing subports at Prince Rupert and Juneau, the Army found it necessary to construct piers and warehouses, because the existing facilities were exceedingly limited. Excursion Inlet was an entirely new port. Otherwise, so far as terminals for the handling of troops and general cargo were concerned, the Army relied on the leasing of municipally and privately owned facilities to meet its requirements on all coasts. Naturally, specialized facilities for storing and transshipping explosives had to be provided by new construction. Troop staging areas also had to be built at most of the ports. The plants required for the processing of vehicles, tanks, and other automotive equipment prior to shipment overseas usually were leased properties, which the ports improved according to their needs.

The largest port installation was at New York. In December 1944 at that port the Army was using a total of 28 piers with berths for 100 ocean-going vessels, 4,895,000 square feet of transit shed space, 5,500,000 square feet of warehouse space, and 13,000,000 square feet of open storage and working space. The next largest installation was at San Francisco where the Army used 20 piers with 43 berths for ocean-going vessels, 1,984,000 square feet of transit shed space, 2,867,000 square feet of warehouse space, and 7,640,000 square feet of open space. At that time the staging areas connected with the New York Port of Embarkation had active space capable of accommodating 78,099 persons (station complement and intransit troops), and the staging areas of the San Francisco Port of Embarkation had a total active capacity of 34,338 persons.[9]

As the ports of embarkation were established they were organized along lines favored by their respective commanders. The Chief of Transportation did not undertake to dictate the plan, although he did issue a "typical organization chart" for the guidance of port commanders. The result was a lack of uniformity which eventually became a handicap to the Chief of Transportation in his effort to establish uniform procedures and thereby simplify the relations of the ports with his office and other

[8] For data concerning seven Army bases on eastern seaboard see *Report of the Chief of Transportation Service*, 1920, pp. 33–38. Except for part of the Brooklyn base, all facilities were leased to commercial operators between the wars. During WW II, TC utilized all except the Newark base, which was used by AAF.

[9] For details concerning these and other ports see folders titled Terminal Facilities, in OCT HB files for respective ports. The variety of facilities controlled by port commanders is indicated in lists attached to Memo, Dir of Plans and Opns ASF for CofT, 25 Jan 44, sub: Utilization Posts, Camps, and Stations, AG 323.3 Trans Gen. See also Exhibit B to 1st Ind, CofT for CG ASF, 29 Jun 44, OCT 323.31 Utilization Command Facilities.

elements of the Army Service Forces.[10] Accordingly, study of the problem of standardization was undertaken by the Director of Operations and the Control Division, and various proposals were presented for discussion at a conference of port commanders held in January 1944.[11] The attitude of the port commanders, generally speaking, was unsympathetic. They were opposed to any plan of complete standardization, since it would ignore differences in organization based on differing local conditions and peculiar personal relationships. They were unfavorable also to a proposal to replace the general staff plan of supervision with one which would divide supervisory responsibility between two officers, designated Director of Port Management and Director of Operations.[12] The consensus of the port commanders was that it would be unwise to attempt to fashion the organization of a military establishment on industrial lines.

Despite the desire of the port commanders that the organizations which they had developed be not seriously disturbed, progress was made in the direction of greater uniformity. A new typical organization chart was issued in April 1944, which the port commanders were urged to follow insofar as practical. The last wartime revision of this diagram, as of 1 July 1945, is incorporated as Chart 3.[13] An approximation of what was informally called the "director system" was achieved by making the deputy port commander responsible for co-ordinating the work of the so-called operating divisions, and the chief of staff responsible for co-ordinating the remaining divisions. Although organizational differences continued as between the several port establishments, sufficient uniformity in the basic plan was evolved to accomplish the purposes toward which the Chief of Transportation had been working.

The operating divisions were those which were concerned directly with the means of transportation and the movements of troops and matériel.[14] The *Water Division* was responsible for the loading and discharging of transports, the employment of crews and stevedores, the operation, maintenance, repair, and conversion of transports and harbor boats, and the operation and maintenance of piers, docks, wet storage basins, and marine repair shops. The *Port Transportation Division* was responsible for controlling the movement of passengers and freight into the port of embarkation, effecting movements of passengers and freight between facilities of the port of embarkation, and co-ordinating all such movements with arrangements made by the other operating divisions for the loading and unloading of transports. The *Overseas Supply Division* received and edited requisitions from the oversea commands for which the port had primary supply responsibility, forwarded extract requisitions to the proper sources of supply, scheduled the inland and oversea movements of such supplies in accordance with shipping schedules and oversea requirements, and kept the oversea commanders informed as to the status of their

[10] Compare typical port organization chart and organization charts of the several ports in TC Org Manual, 20 Oct 42, OCT HB TC Gen Org Manuals. See remarks by Gen Gross at First Port Comdrs Conf, 30 Aug 43, pp. 2–3, OCT HB PE Gen Port Comdrs Conf.

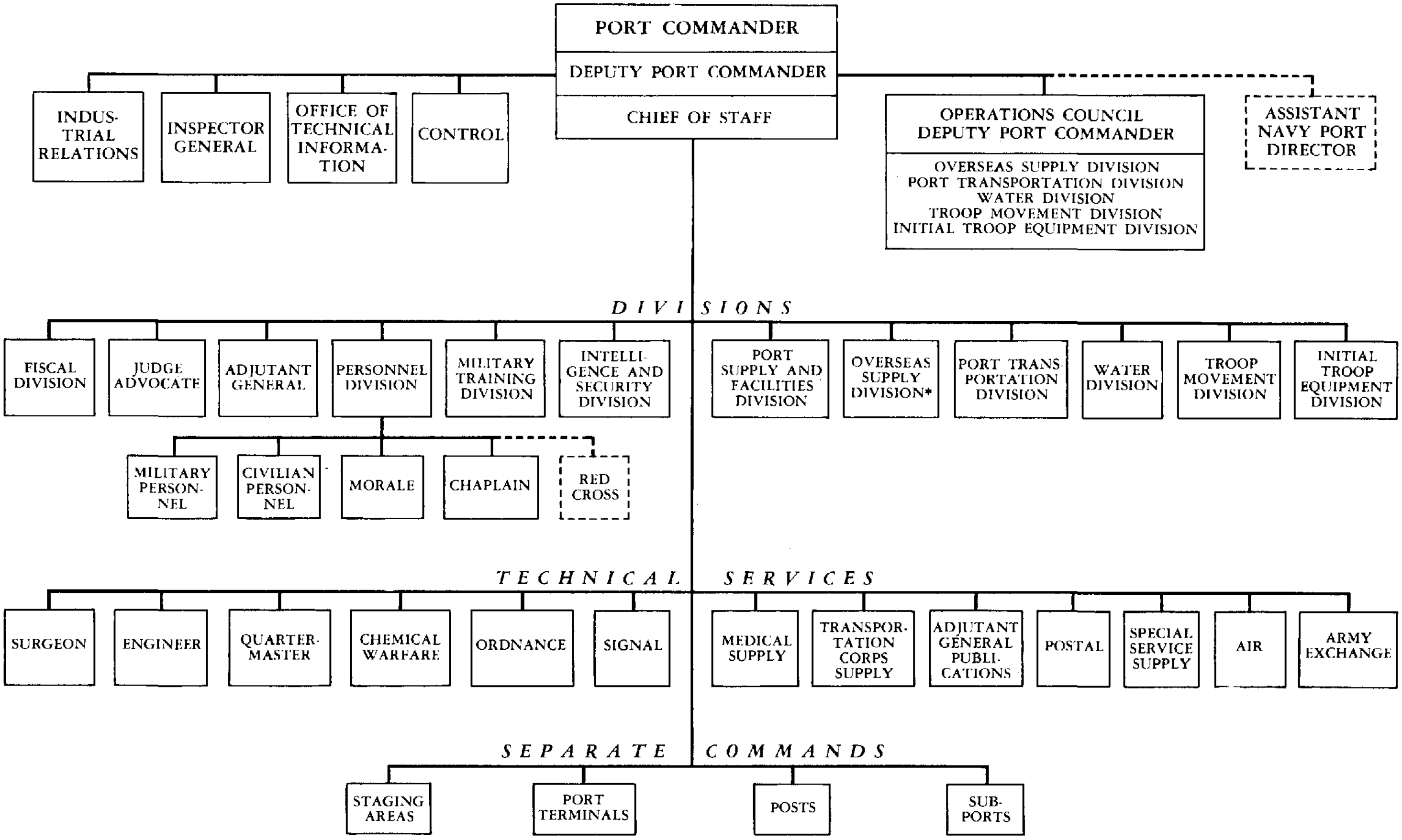
[11] Proceedings of Conf, New Orleans, 11–14 Jan 44, I, 1–25, OCT HB PE Gen Port Comdrs Conf.

[12] See record of voting on three proposals in unsigned undated memo obtained from office of Dir of Opns OCT, OCT HB PE Gen Org.

[13] No significant change was made between April 1944 and July 1945.

[14] TC Pamphlet 1, Org Manual, Apr 44, Sec. 501.00, pars. 4, 15–19.

Chart 3—Typical Organization for Ports of Embarkation, Approved by the Chief of Transportation, Army Service Forces: 1 July 1945.



*The Overseas Supply Division exercises supervision over the Technical Services in connection with overseas supply matters.

Source: Report of the Chief of Transportation, Army Service Forces, World War II, 30 November 1945, p. 64.

requisitions. The *Troop Movement Division* arranged for the orderly movement of transient military personnel through the port, supervised the processing of such personnel at staging areas, prepared embarkation schedules and billeting plans, and co-ordinated the work of all other divisions affecting such movements. The *Initial Troop Equipment Division* controlled the flow through the port of equipment and supplies accompanying troops and also matériel shipped separately but consigned to specific units overseas, and it supervised port activities pertaining to the clothing and individual equipment of transient military personnel. The chiefs of these divisions constituted the *Operations Council,* which met from time to time with the Deputy Port Commander to plan for port operations and discuss the problems involved.

This brief description of the functions of the operating divisions is in substance a description of the basic functions of the ports. Broadly speaking, all other elements of the port organizations existed for the purpose of supplementing and supporting the operating divisions or contributing to the administration of the huge installations which were built up around them. Since the more important activities of both the operating and the nonoperating divisions will be dealt with in other parts of this history, the remainder of this section will be devoted to certain significant developments concerning relationships within the ports and relationships between the ports and other military agencies.

In the preceding chapter reference was made to the position taken by some officers in the ASF headquarters that ports of embarkation should be controlled by the service commands. This was but one aspect of the broader doctrine that there should be no exempted stations whatsoever. The argument supporting this doctrine was that exempted stations within the service command areas violated the principle of unity of command and constituted an obstacle to efficient administration and effective utilization of personnel and facilities. This subject was discussed repeatedly, but in the summer of 1943 General Somervell ruled definitely that the exempted stations would be continued. In its bearing on the ports of embarkation, General Gross considered this decision "one of the finest," and remarked that it had been achieved "not without struggle." [15] He considered it essential that the ports be operated under the control of the same agency that controlled inland traffic and ocean transport, since they served as a link between the two and performed a co-ordinating function which was necessary both to the orderly flow of troops and supplies from the zone of interior to the oversea commands and to the avoidance of idle time for ships and railroad equipment.

In addition to suggestions that the ports of embarkation be removed entirely from his jurisdiction, General Gross had to contend with proposals to remove important activities from the control of the port commanders. In the summer of 1942 drafts of directives prepared in Services of Supply headquarters for the establishment of the service commands, as successors to the corps areas, provided for control of troop staging areas by the service commanders rather than the port commanders. The Chief of Transportation entered a protest. The proposed change, he believed, would

[15] Questions and Answers, SvC Conf, 22–24 Jul 43, Questions 6 and 28, WD Library; Port and Zone Comdrs Conf, 27–28 Sep 45, p. 21, OCT HB TZ Gen.

interfere with the close co-ordination which had been possible because troop movements had been under the control of a single agency at all stages. It was necessary to co-ordinate the movement of troops from their home stations with the readiness of the staging areas to accommodate them; to co-ordinate the processing of the units at the staging areas (including the correction of deficiencies in personnel, equipment, and training) with their embarkation on the transports (including the staffing and equipment of the ships and the billeting arrangements); and to co-ordinate the movement of the troop units and the movement of their organizational equipment through the ports. If such co-ordination had to be worked out between the port commanders and the service commanders, whose headquarters in some instances were in widely separated cities, the possibility of delays and discrepancies would be much greater than if the port commanders had control throughout. This argument was effective and the staging areas were left under the control of the port commanders.[16]

A similar proposal relative to the administration of oversea supply was put forward by Army Service Forces headquarters during the spring of 1943. This function had not been assigned to the port commanders prior to Pearl Harbor, hence was not traditionally a part of the port responsibility. The proponents of the new plan argued that the control of oversea supply was one of the most important ASF functions and should be administered by an agency which devoted itself solely to that purpose and was more closely aligned with and more directly controlled by ASF headquarters. They pointed out shortcomings in the oversea supply operation as it had been performed under the port commanders up to that time. As an alternative they suggested that an Atlantic Oversea Service Command be established at New York to operate under the direction of ASF headquarters and assume the supply function for the transatlantic theaters; similar organizations for other theaters were to be left for future consideration. Again the Chief of Transportation voiced his protest. He pointed out that lack of ships was the most serious aspect of the oversea supply problem; that the introduction of another agency into the operation would impair the ability of the port commanders to co-ordinate the flow of supplies to the ports with the readiness of shipping to load them, and thus would affect the efficiency with which the available bottoms were used; that the responsiveness which the oversea supply divisions at the ports had developed in filling theater requisitions and in dealing with changed priorities and other emergency demands would be disturbed by the proposed change. General Gross further stated that any changes in organization and procedures at the ports that might be considered necessary to make the operation conform more fully to ASF standards would be made. An independent study of this matter by Maj. Gen. W. D. Styer, ASF Chief of Staff, resulted in a finding that oversea supply in general had been handled efficiently by the port organizations, and in a recommendation that no radical change be made in the plan then in operation but that certain details of the system

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[16] Memo, Opns Off OCT for Gross, 26 Jul 42, sub: Effect of new SvC Org, and atchd papers, OCT HB PE Gen Staging Facilities; Conf of CG's SOS, 30 Jul 42, App. to Rec of Afternoon Session, Question 40, p. 21.

be altered.[17] This recommendation was approved by General Somervell.

Although ports of embarkation were exempted stations and hence independent of the service commands so far as their basic transportation activities were concerned, the service commands were responsible for a wide range of functions relating to the operation and maintenance of the port installations.[18] In many respects this arrangement was entirely acceptable to the port commanders, but in others they found cause for complaint. Although some adjustments were made to meet the port commanders' desires, and a high level of co-operation was maintained, the arrangement was never wholly satisfactory to them.[19] Maj. Gen. H. M. Groninger, who commanded the New York Port of Embarkation during the greater part of the war and later the San Francisco Port of Embarkation, pointed out in a postwar review of problems that although the port commander had the entire responsibility for the success of port operations, that success was dependent in many instances on new construction or the acquisition or repair of existing facilities, concerning which he was required to make detailed justification to the service command, with resulting delays and sometimes failures in obtaining authorizations. He also mentioned internal security, public relations, utilities, post exchanges, and motor vehicles as matters which were responsibilities of the service commands but which the port commanders could have handled directly with advantage. Brig. Gen. J. K. Herbert, commander of the Los Angeles Port of Embarkation, indicated that even though there might be no inherent disadvantage in having the service command responsible for certain functions, the port sometimes suffered because the personnel assigned to perform those functions was inadequate in number or experience, or because experienced personnel was removed without notice to the port commanders and without provision of satisfactory replacements. At the foundation of the port commanders' problem was the fact that in certain aspects of their work they had two bosses, the service commanders and the Chief of Transportation, whose interests and points of view did not always agree.

Each technical service or other War Department agency having a technical or supply responsibility assigned representatives to the ports of embarkation. These representatives served as technical advisers to the port commanders and were responsible for the performance of the functions of their respective services on behalf of the port establishments, the troops, equipment, and supplies handled in transit at the ports, the vessels operated by the ports, and the supply requirements of the oversea commands for which the respective ports

[17] Memo, C of Contl Div ASF for CG ASF, 16 Mar 43, sub: Proposed Org of Atlantic Oversea SvC; Memo, ACofS for Opns ASF for CofT, 27 Mar 43, sub: Shipments Overseas; Memo, Gross for Styer, 1 Apr 43; Memo, Styer for Somervell, 16 Apr 43. All in OCT HB PE Gen Overseas Supply.

[18] AR 170-10, par. 4, 24 Dec 42; ASF Cir 265, Sec. VII and Incl 3, 11 Jul 45; See Memo, sub: Relationship between Sv Comdrs, PE's, and TZ's, drafted for Gen Gross's use at SvC Conf, Jul 43, OCT HB Exec Relations with SvC's.

[19] Remarks of CofT at SvC Conf, 22-24 Jul 43, pp. 107-10, WD Library; see also remarks by CG 2d SvC at same conf, pp. 293-94, WD Library; Ltr, CG SFPE to CofT, par. 11, 18 Sep 45, sub: Rpt on Accomplishments, OCT HB SFPE Correspondence; Memo, CG LAPE for CofT, par. 3f, 17 Sep 45, sub: Rpt on Accomplishments, OCT HB LAPE Correspondence; Memo, C of Port and Field Agencies Div OCT for Gen Wylie, par. 9, 12 Sep 45, sub: Lessons Learned in WW II, OCT HB Port and Field Agencies Div Rpts.

were responsible. In most instances the port technical services required large organizations. This was notably true in the case of the engineer officer whose responsibilities included the construction and repair of port facilities, the ordnance officer who was responsible for the preparation of artillery, tanks, trucks, and other equipment for overseas shipment, and the quartermaster officer who supplied a great variety of subsistence and equipment to the port installations and the troops at the staging areas.[20]

Before the war the port representatives of the technical services, or supply services as they then were called, were responsible more to the chiefs of services than to the port commanders, but a change in that relationship was necessary because of the increased responsibilities placed on the ports during wartime and the necessity of effecting the closest possible co-ordination of all port activities in order to avoid delays to movements and insure the observance of priorities. Insofar as their functions related to oversea supply, the representatives of the technical services were under the immediate direction of the port oversea supply officers, whose handling of complex requisitions from the theaters required careful collaboration on the part of all concerned. In other respects the technical service representatives were responsible directly to the port commanders.[21]

The Chief of Transportation regarded the functions of the technical service representatives to the ports as highly important, especially in relation to the movement of troops and matériel. It was his policy that on technical matters the chiefs of services and their depots should deal directly with the ports, rather than through TC headquarters, and that they should transact such business exclusively through their port representatives, rather than with the several divisions and branches directly.[22] This was desirable not only as a matter of centralizing responsibility for the respective services, but also because the port organizations differed and it was difficult for an outsider to know the office to which his business should be taken. The plan worked satisfactorily except as regards port air officers. Although the functions of these officers were explicitly defined by the War Department, and the Chief of Transportation requested his port commanders to make full use of their services, AAF headquarters restricted the activities of port air officers to the movement of troops and their accompanying equipment and made the Air Service Command responsible for other equipment and supplies moving overseas.[23] The port air officers, therefore, did not have the status and effectiveness at the ports of embarkation which the Chief of Transportation desired.

During the 1930's the general depots at New York and San Francisco were under the command of the commanders of the ports of embarkation and were operated at the same locations—the Brooklyn Army Base and Fort Mason. As the volume of

[20] PE historical reports include sections relating to technical services, and technical services at NYPE made separate reports. See OCT HB files for respective PE's.

[21] See NYPE Org Manual, par. 500, 1 Jul 44, OCT HB NYPE Org.

[22] Memo, CofT for port comdrs, 12 Jun 43, sub: Liaison with C's of Tech Svs; Memo, CofT for C's of Tech Svs, 12 Jun 43, same sub. Both in OCT HB Exec. Staybacks, Dec 42–Dec 44.

[23] WD Cir 137, Sec. I, 10 Apr 44; Memo, CofT for port comdrs, 20 Apr 44, sub: Port Air Offs, OCT HB Meyer Staybacks; Remarks of Lt Col R. D. Meyer at Mtg of Port Comdrs and Port Air Offs, 8 Jul 44, included in Min, Port and Zone Comdrs Conf, 8–9 Jul 44, OCT HB PE Gen Port Comdrs Conf.

traffic at New York increased, the undesirability of this arrangement from the standpoint of possible congestion was recognized, and in May 1941 the New York General Depot was ordered out of the Brooklyn Army Base. Finding new quarters was a slow process and the removal was not completed until almost the end of the year.[24] No corresponding action was taken in regard to San Francisco until after Pearl Harbor, and the necessity of moving through the port area supplies for both the theaters and the troops of the Western Defense Command contributed to the serious railway congestion which prevailed there during the early months of the war. At San Francisco it was not merely a question of removing the general depot from the port of embarkation, but of moving it out of the San Francisco Bay area, and this was not a simple matter under prevailing circumstances, since time was required by the several supply services to find suitable new quarters and relocate their depot operations.[25] In view of the increasing responsibility borne by San Francisco in the war against Japan and the limited capacity of the rail facilities serving the port, the Chief of Transportation in 1944 opposed the allocation of even a small amount of space at the Army port of embarkation for the accommodation of Signal Corps stocks intended for local distribution.[26]

The removal of the New Orleans General Depot and the Boston Quartermaster Depot from the Army bases at those ports, also undertaken early in 1942, was slow of accomplishment, but the delays were not so serious as at San Francisco because the pressure on those ports was not so great.[27] The Seattle General Depot was located some distance from the Army port installation when we entered the war, and although its removal to a location inland was proposed, such action was not found necessary.[28]

Although the port commanders clearly were responsible for the operation of ships and shipping terminals at their installations, during the early part of the war they were in some instances embarrassed by the traditional independence of the Army Transport Service superintendents who were immediately responsible for these activities. This independence had developed during peacetime when ATS overshadowed all other phases of Army port operation.[29] In wartime other activities took on increased importance, and closer co-ordination with water transportation was necessary. General Gross first attacked this problem in July 1943 by calling attention to the fact that

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[24] WD GO 4, Sec. II, 15 Apr 32; Memo, C of Trans Br G–4 for C of Req and Dist Br G–4 (Aurand), 18 Aug 41, OCT HB Gross Day File; Summary of Hist Events and Statistics NYPE 1941, pp. 4–5, OCT HB NYPE.

[25] Memo, CG SFPE for ACofS G–4, par. 3, 4 Jan 42, sub: Rail Congestion in SF Bay Area, G–4/33867–1; Memo, ACofS G–4 for TAG, 18 Jan 42, sub: Diverting Shipments from SF, G–4/33867–1; Memo, TAG for C's of Svs, 2 Feb 42, AG 681 SFPE; 1st Ind, ACofS G–4 for CG SFPE, 1 Mar 42, G–4/33889.

[26] Memo, CofT for Dir of Supply ASF (Heileman), 31 May 44, OCT HB Gross Day File.

[27] Memo, ACofS G–4 for TAG, 9 Jan 42, sub: Shipment of Cargo through NOPE and Discontinuance NOGD, OCT 000.900 NO; Hist NOPE, Bk. II, Warehousing Sec., p. 3, OCT HB NOPE; BPE Hist Rec, Jan–Jun 42, pp. 2–3, OCT HB BPE.

[28] Memo, TAG for CG's IX Corps Area, SFPE etc., 30 Sep 41; Memo, AG 681 Seattle QM Depots (7–5–41) MR–M–D; Memo for record only, 3 Feb 42, sub: Change in Status of SF and Seattle Gen Depots, with notation of Conf, author with Col T. J. Weed. All in OCT HB SPE Misc.

[29] See WD TM 10–380, Sec. II, III, 14 Feb 41, sub: Water Trans.

REACTIVATED ARMY BASES. *Built for World War I, these installations at Boston (top) and New Orleans (bottom) served the Transportation Corps well in the second world conflict.*

ATS operations were completely under the control of the port commanders. Soon thereafter, in order to further emphasize this relationship, he announced the abolition of the term Army Transport Service and the substitution of the title Water Division to designate that phase of port operation.[30] After visiting ports in some of the theaters, he requested that this change be brought to the notice of the oversea commanders in order that it might be made effective at ports under their control.

It was desirable sometimes to load or discharge cargo and to embark or disembark passengers at a U.S. port where there was no port of embarkation, subport, or cargo port. Initially, the responsibility for such an operation was assigned to the zone transportation officer in whose territory the port lay. He might perform this function entirely with personnel of an organization under his own control, such as a district transportation office or a port agency, or he might call on a near-by port commander for personnel or other assistance.[31] Later this responsibility was assigned to the commanders of the ports of embarkation, and each was given jurisdiction over a section of the coast line adjacent to his command. The port commanders were directed to utilize local organizations of the transportation zones insofar as possible but to supply experienced Water Division personnel from their own organizations to whatever extent might be found necessary. This proved to be the better arrangement, since transportation zone personnel frequently were not experienced in the technical aspects of docking and maintaining ships and handling cargo.

The port commanders had extensive training functions. In addition to their responsibility for continuance of training troops of all arms and services while they were at the staging areas awaiting embarkation, the port commanders trained individuals and troop units for a variety of transportation tasks.[32] In the early part of the war all troop units for the operation of ports in oversea theaters were trained at ports of embarkation in the zone of interior. Even after unit training centers had been established for this purpose, the port commanders provided some training for port headquarters, port companies, amphibian truck companies, and harbor craft companies. The command of the port commander at New Orleans included the unit training center at Camp Plauché and the Transportation Corps School for officers and officer candidates. Prior to the establishment of the Transportation Corps School at New Orleans in 1944, the port commanders at New York and San Francisco operated officer training schools, primarily to provide instruction in military matters and orientation to the work of the Transportation Corps for men recently commissioned from civil life.

The personnel required to operate the many facilities and carry on the multifarious activities at Army ports necessarily was large. The commander of the New York Port of Embarkation stated early in 1945 that the number of persons then employed at his installation was over 50,000, twenty times greater than it had been in

[30] OCT Cir 88, 16 Jul 43, sub: Status of ATS; OCT Cir 113, 13 Sep 43, sub: Designation of Water Div; Memo, Gross for Dir of Opns OCT (Wylie), airmail from Fiji, 20 Sep 43, OCT HB Theaters Gen; WD Cir 234, Sec. III, 27 Sep 43.

[31] OCT Cir 80–7 rev., 29 Nov 44, sub: Responsibility of ZTO's for Water Trans Matters; *Ibid.*, rev., 15 Mar 45.

[32] PE's part in TC training program will be discussed in second volume of TC history.

1940.[33] The personnel of the ports, subports, and cargo ports which were active on 31 December 1944 totaled approximately 171,000, of whom about 155,000 were employed on shore and about 16,000 on transports and small boats. These figures do not include officers and enlisted men in training at the ports for oversea duty, or personnel of the service commands performing functions at the ports for which the service commands were responsible. The above total may be broken down into three general classes: military personnel, including officers, nurses, and enlisted men, representing 36.6 percent; the ports' civilian employees, including marine personnel, representing 45.6 percent; other workers, including contractors' employees (such as longshoremen), and Italian Service Units and German prisoners of war who were assigned to the port commanders, representing 17.8 percent. The distribution of this personnel among the port installations at the end of 1944 is shown in Table 2.

Because efficient port operation was essential to the orderly flow of men and matériel to the oversea commands, General Gross selected the port commanders with great care. He saw that executive ability was the prime requisite for the head of so large and complex an installation. Expert assistants were provided in all technical branches, and the essential task of the port commander was to co-ordinate and control their activities and to plan for the development of personnel and facilities adequate

[33] Maj Gen H. M. Groninger, "50,000 People," *Army Transportation Journal* (February 1945).

TABLE 2—PERSONNEL EMPLOYED AT PORT INSTALLATIONS: 31 DECEMBER 1944

Port	Total	Military	Civilian	Other
All Ports	171,099	62,646	77,986	30,467
Boston Port of Embarkation	12,558	4,881	4,570	3,107
Searsport Cargo Port	850	186	128	536
New York Port of Embarkation	55,791	22,616	25,344	7,831
Philadelphia Cargo Port	4,836	937	969	2,930
Hampton Roads Port of Embarkation	17,053	7,498	4,620	4,935
Baltimore Cargo Port	3,291	444	969	1,878
Charleston Port of Embarkation	9,068	2,737	5,850	481
New Orleans Port of Embarkation [a]	12,077	2,584	5,861	3,632
Los Angeles Port of Embarkation	8,513	2,715	3,499	2,299
San Francisco Port of Embarkation	27,142	9,154	17,024	964
Seattle Port of Embarkation	14,006	5,266	7,159	1,581
Portland Subport	1,487	683	601	203
Prince Rupert Subport	4,079	2,726	1,263	90
Juneau Subport	348	219	129	....

[a] Figures (for New Orleans) do not include personnel employed by port commander for operation of unit training center at Camp Plauché and TC School.

Source: Based on statement prepared in Office of Dir of Pers OCT, 23 Feb 45, OCT HB PE Gen Pers.

for future military needs. The port commanders also had to maintain successfully the vital relationships with the service commands, with local representatives of the Navy, the War Shipping Administration, the British Ministry of War Transport, the Office of Defense Transportation, and the carriers, and with the oversea theaters. Eventually all commanders of ports of embarkation (not subports or cargo ports) were general officers, and the commanders of the two largest ports were major generals. The wartime commanders of the ports of embarkation are listed in Appendix B.

Transportation Zones

The Chief of Transportation was responsible in the zone of interior for the "direction, supervision, and coordination of all transportation by common carrier . . . for the War Department." [34] It was his task to make sure that movements of troops and supplies were started and deliveries effected according to the requirements of the military program. To achieve this result for the Army, it was necessary for him to maintain close surveillance over transportation in general and to take timely steps to prevent the development of unhealthy conditions, since any serious deterioration in the overall situation would affect military traffic. Delay or confusion in military movements in the zone of interior, moreover, would affect shipments to the theaters, directly or indirectly, and might affect combat operations within the theaters. These facts are to be kept in view when considering the numerous types of independent field installations set up by the Chief of Transportation to deal with inland traffic, and their eventual incorporation into nine transportation zones.

During peacetime no such field organization was necessary, since there was little danger of congestion or interrupted service on the common carriers, and military movements were mostly of a routine nature so that failure to maintain schedules involved no serious consequences. Under such circumstances it was feasible to leave the handling of the Army's inland traffic to the transportation officers at posts, camps, and stations, and to the carriers, with only general supervision by The Quartermaster General. The emergency which followed the outbreak of hostilities in Europe and brought an increase in both military and nonmilitary traffic in the United States presented a different set of circumstances. This became clearly apparent after the passage of the Lend-Lease Act in March 1941, which added to the volume of both inland and oversea freight traffic. The first new units of the transportation field organization, to complement the ports of embarkation, were established during the summer of that year.[35]

Lend-lease supplies did not pass through Army ports of embarkation but were handled over commercial piers, and in the beginning there was no adequate machinery for co-ordinating their transshipment. Realizing that this situation might lead to port congestion which would affect military movements, The Quartermaster General's Commercial Traffic Branch sought authority to establish commercial traffic agencies at the ports as circumstances might warrant, and that authority was granted in July

[34] AR 55-5, par. 3*a*, 5 Oct 42.

[35] An office was set up by OQMG in Detroit early in 1940 to aid the movement of 17,000 trucks from manufacturers to troop units then preparing for maneuvers, but this was a temporary mission. Interv, author with Anthony G. Liebler, 25 Apr 47, OCT HB OQMG Coml Traf Br.

1941.[36] The first such agency was opened at New York during the same month and another was established in Boston during the following October. Their function was to co-operate with the port representatives of shippers, consignees, and carriers in order to keep lend-lease supplies flowing freely through the ports; and to keep conditions at railway and shipping terminals under observation and report developments to The Quartermaster General. After our entry into the war, commercial traffic agencies, or port agencies as they then were designated, were established at other large ports, where they functioned under the general supervision of the Traffic Control Division in the Office of the Chief of Transportation.[37]

During the spring of 1941 there were extended discussions between officials of the Division of Defense Aid Reports (later known as the Office of Lend-Lease Administration) and the War Department regarding the need for transit storage facilities back of the ports to serve as reservoirs into which equipment and supplies destined overseas could be diverted pending the ability of the ports to receive and transship them. It was believed that the volume of matériel produced by American industry for use overseas would increase more rapidly than the capacity of shipping to lift them, so that protection against port congestion would be necessary. In July 1941 these officials decided to build two such facilities, at Marietta, Pa., and Voorheesville, N. Y., to back up the North Atlantic ports. Immediately after Pearl Harbor six additional transit storage installations were authorized, and later two more were added, making a total of ten. These holding and reconsignment points, as they soon were designated, operated under the supervision of the Chief of Transportation's Transit Storage Division and handled supplies destined to the U.S. forces overseas and to allied nations under lend-lease.

During the twelve months following Pearl Harbor the Traffic Control Division established additional field agencies. Concurrently with the designation of the Western Defense Command as a theater of operations in December 1941, regulating stations were installed at Spokane, Ogden, Salt Lake City, Albuquerque, and El Paso to expedite, hold, or divert westbound movements upon request of the theater commander.[38] In view of the growing need for representation at important production centers to aid the carriers and the transportation officers at Army installations and industrial plants in moving traffic promptly and efficiently, traffic control agencies were established at Detroit, Chicago, Philadelphia, St. Louis, and Cincinnati, beginning in May 1942.[39] In July the first steps were taken in the development of an extensive consolidated freight service to handle less-than-carload shipments, by the establishment of a consolidating station at Chicago and distributing agencies at San Francisco and Los Angeles.[40]

Other operating divisions in the Office of the Chief of Transportation also found it desirable to place representatives in the

[36] Memo, C of Trans Div (Dillon) for Exec Off OQMG, 21 Jul 41, approved by QMG on same date, OCT HB OQMG Coml Traf Br; OQMG Office Order 229, 11 Oct 41.

[37] Memo, TAG for CG's SOS, corps areas, etc., 11 May 42, sub: Designation of Port Agencies as Exempted Stations, AG 323.7 (5-8-42). Where port agencies were located in same cities as PE's they received technical assistance from port commanders when needed.

[38] Memo, TAG for CG's of Armies, Army Corps, WDC, etc., 19 Dec 41, AG 320.2 Reg Stations.

[39] OCT Cir 14, 18 May 42, defines functions of traffic control agencies.

[40] Rpt on Adm Developments in Traf Contl Div, pp. 6-7, 23 Nov 42, OCT HB Traf Contl Div Rpts.

field.[41] The Transit Storage Division, in order to better supervise the operation of the holding and reconsignment points, established district offices at Philadelphia and San Francisco in July 1942. The Highway Division obtained authorization in September 1942 to establish highway agencies at Detroit, Pittsburgh, Chicago, and Cleveland, and made plans for placing its representatives at numerous other points. The Rail Division assigned representatives to the larger port agencies to assist with railway traffic problems.

This complex field establishment, embracing agencies of several kinds, each created to meet a specific need, presented certain disadvantages. Over-all co-ordination was difficult because the different types of agencies were responsible to different divisions in the Office of the Chief of Transportation. These divisions, located in Washington and heavily burdened, were obliged to do most of their supervising at long range. Furthermore, having several independent transportation field offices located in the same city was uneconomical from the standpoint of personnel and office space.

The first attempt to correct this situation was made in July 1942. At that time all field agencies, other than ports of embarkation, located in cities where there were port agencies, were placed under the control of the respective port agencies. New installations, known as transportation agencies, were set up at important inland cities and were given control over all field activities within specified areas, except holding and reconsignment points.[42] While this realignment of the existing organization was being worked out, the Chief of Transportation found it necessary to establish a new type of field agency to support his growing supply program. Five zone procurement offices were created in October 1942 to function as parts of the transportation agency at Chicago and the port agencies at Boston, Philadelphia, New Orleans, and San Francisco.[43]

The reorganization of July 1942 was only an initial step in the direction of consolidation, since it left twenty-seven field installations (port agencies, transportation agencies, holding and reconsignment points) functioning independently of each other and requiring supervision in both operating and administrative matters by the Office of the Chief of Transportation. The need for greater integration was apparent, and it was given added importance in November 1942 by the transfer to the Chief of Transportation of procurement responsibility for military railway equipment.

This objective was achieved with the creation of nine transportation zones, coextensive with the nine service commands, effective 1 December 1942.[44] All existing field agencies of the Transportation Corps,

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[41] Memo for record, prepared in Transit Stor Div, 14 Nov 42, OCT HB Transit Stor Div; OCT Cir 46, 2 Sep 42; Memo, C of Hwy Div for C of Port and Field Agencies Div OCT, 17 Nov 42, OCT 323.3 Misc 1942; Rail Div Hist Rec, Org Developments up to 15 Nov 42, p. 5, OCT HB Rail Div Rpts.

[42] WD Cir 236, Sec. VII, 20 Jul 42; OCT Cir 60, 12 Oct 42, sub: Port Agencies and Trans Agencies; TC Org Manual, Secs. 20–22, 20 Oct 42. These documents give locations and define functions of port agencies, transportation agencies, and holding and reconsignment points. Latter document also gives locations of nine port agencies and eight transportation agencies and their subordinate activities. List of subordinate activities includes some which were projected but not actually established.

[43] WD Cir 341, 10 Oct 42; OCT Cir 61, 14 Oct 42, sub: Zone Procurement Offices; OCT Cir 62, 19 Oct 42, sub: same.

[44] SOS Cir 91, 1 Dec 42, sub: Reorg of TC Field Agencies.

except those pertaining to the ports of embarkation and to training, were made responsible to the new zone transportation officers.[45] The port agencies, holding and reconsignment points, regulating stations, consolidating stations, and distributing agencies retained their separate identities. The traffic control agencies, transportation agencies, highway agencies, and transit storage district offices were discontinued and their work was taken over by the zone technical staffs. Concurrently, fourteen district transportation offices were created within the zones, to have jurisdiction over installations and activities in areas located too far from zone headquarters for effective supervision by those offices. The Chief of Transportation was authorized to establish additional district offices as needed and to set up branches of zone and district offices in cities where the transportation activity did not warrant the establishment of full-fledged district offices.

The nine zone transportation officers were the field representatives of the Chief of Transportation, to whom he delegated "full authority on transportation matters," subject to the limitations imposed by Army regulations and Transportation Corps directives. Their stated mission was to exercise general supervision over all transportation matters within their respective zones, except matters under the authority of defense commands, service commands, port commanders, the Military Railway Service, and installations not under the command of the Chief of Transportation; to establish, command, supervise, and control installations necessary for carrying out the directions of the Chief of Transportation; to assist the Chief of Transportation in controlling the flow of traffic through the zones so as to avoid congestion; to give assistance in transportation matters, upon request, to commanders of service commands and commanders of exempted stations under the control of War Department agencies other than the Transportation Corps.

The zone transportation officers thus were charged with certain functions which previously had been performed by the operating divisions in the Office of the Chief of Transportation, directly or through field installations under their control. While it was essential that the operating divisions and the zone transportation officers should co-operate closely, and desirable that the operating divisions should continue to aid the field installations in technical matters, the Chief of Transportation was insistent that this relationship should in no way interfere with the zone transportation officers in the performance of their mission or qualify their responsibility. Accordingly, he directed that the authority of the divisions in his office to communicate directly with field establishments on matters of general routine and on technical details should be "closely construed," and he laid down rules to be observed to that end.[46] General Gross wanted the zone officers to feel free to exercise initiative in the fulfillment of their purpose.

While the directive establishing the transportation zone organization was under consideration, opposition to the idea was ex-

[45] Installations placed under zone officers are listed in Instruction 5–1, Operation and Instruction Manual, Zone and Dist Offices, CofT, 22 Dec 42. For revised instructions see Zone and Dist Trans Offs' Guide, Nov 43. Both in OCT HB TZ Gen.

[46] Memo, CofT for C's of OCT Divs and ZTO's, 23 Jan 43, sub: Direct Communication with Field Estab, OCT HB TZ Gen.

pressed by the Assistant Chief of Staff for Operations in the Services of Supply headquarters.[47] That officer pointed out that the service commands were concerned with movements of troops and supplies, and that the transportation officers of the service commands could serve as co-ordinators for all Transportation Corps activities within their respective jurisdictions. He believed, therefore, that the transportation zone offices were not needed, except perhaps in connection with the procurement, storage, and distribution of matériel peculiar to the Transportation Corps. Realizing that similar views might be held by some of the service commanders, the Chief of Transportation emphasized to his zone officers the desirability of full co-operation, and arranged that the SOS chief of staff should address a letter to each service commander explaining how the zone transportation officers could be of aid to them.[48]

The directive by which the transportation zones were created stated not only that the zone transportation officers, upon request, would aid the service commanders in dealing with transportation matters, but that they would, upon request, act as additional members of the service commanders' staffs for transportation.[49] Certain service commanders expressed the view that this optional arrangement would not prove satisfactory and that a direct order was preferable. General Gross accordingly arranged that this provision of the directive be revised to state positively that the zone transportation officers would be attached to the staffs of the commanding generals of the corresponding service commands and would be charged with staff supervision over service command transportation matters.[50] When this revision was transmitted to the zone transportation officers by the Office of the Chief of Transportation, they were informed that the change placed them in a relationship to the service commanders similar to that of the division engineers.

Despite the positive language of the latter directive, the majority of the service commanders did not comply at once. The Chief of Transportation kept developments under close observation and kept ASF headquarters informed. He found that where the zone transportation officers were permitted to function in the dual capacity a very workable arrangement resulted, which reduced rather than increased duplication of personnel and activities.[51] He found that the delay on the part of certain service commanders in accepting the arrangement was due to lack of understanding as to what was intended, inability to visualize how the arrangement could be effected without the maintenance of duplicating staffs, or dis-

[47] Memo, ACofS for Opns SOS for CofT, 28 Nov 42, OCT 020 Reorg of TC Field Installations.

[48] Memo, CofT for CofS SOS, 5 Dec 42, sub: Reorg of TC Field Agencies; Memo, CofS SOS for CG's of SvC's, 6 Dec 42, same sub. Both in OCT 020 Reorg of TC Field Installations. Prior to establishment of TZ's, most SvC's had disregarded offer of CofT to provide experienced personnel to serve as transportation officers at SvC headquarters, posts, camps, and stations. See Memo, ACofT for CofT, 12 Sep 42, OCT HB Gross SvC's.

[49] SOS Cir 91, pars. 8b (5) and 9; Memo, CofT for TAG, 6 Jan 43, AG 320.2 (1 Dec 42) Reorg of TC Field Agencies.

[50] SOS Cir 3, 6 Jan 43, sub: Reorg of TC Field Agencies; Memo, OCT for ZTO's, 7 Jan 43. Both in OCT 020 Reorg of TC Field Installations.

[51] Memo, CG 6th SvC for CG SOS, 23 Jan 43, OCT 020 Reorg of TC Field Installations; 2d Ind, CofT for CG SOS, 10 Mar 43, and atchd papers, OCT HB Exec Relations with SvC's.

satisfaction with the incumbent of the zone transportation office.[52]

For more than a year after the establishment of the zones the Chief of Transportation was confronted not only with the refusal of some service commanders to place the zone transportation officers on their staffs or otherwise utilize their services, but also with the more basic contention that the zone transportation organizations should be solely under the control of the service commanders.[53] General Gross preferred to meet this situation with persuasion rather than to seek an arbitrary enforcement of the SOS directive. He pointed out that many of the functions of the zone transportation officers were of a highly technical nature and entirely foreign to the normal operations of the service commands, such as those relating to port agencies, holding and reconsignment points, consolidating stations, distributing agencies, and the control of traffic movements. He indicated that while the service commanders were responsible for supervision of transportation activities at Class I and Class II installations, they had no such responsibility at Class III and Class IV installations and that only the zone transportation officers were in a position to aid the transportation officers at such stations. He emphasized that the zone transportation officers dealt with many matters which transcended service command boundaries and could be satisfactorily handled only by officers functioning under the direction of the Chief of Transportation, who operated on a nation-wide basis.[54]

In July 1943 General Gross, in an address before a conference of service commanders, explained the purpose and organization of his office and the zone transportation establishments, cited the satisfactory results which had been achieved in the second and sixth zones where the zone transportation officers had been fully utilized by the service commanders, and indicated his willingness to place in charge of the zones individuals who were acceptable in all respects to the service commanders. At this conference General Somervell, after hearing both sides of the case, stated that he understood the service command point of view, but that in wartime control of transportation should not be broken up by service command boundaries, and that the existing arrangement would stand.[55]

In December 1943 it was reported that the second, sixth, seventh, eighth, and ninth zone transportation officers were serving as representatives of both the service commanders and the Chief of Transportation. It was not until September 1944, however, that General Gross was able to announce that all zone transportation officers had been designated transportation officers on

[52] Memo, 1st ZTO for C of Contl Div OCT, 8 Mar 43; Memo, CofS ASF for CG 4th SvC, 24 Mar 43; 1st Ind, CG 4th SvC for CG ASF, 11 Apr 43; Memo, C of Contl Div OCT for C of Contl Div ASF, 23 Jun 43. All in OCT 020 Reorg of TC Field Installations. See also Memo, 4th ZTO for CofT, 1 Mar 43; Memo, Port and Field Agencies Div OCT (Mathews) for Dir of Opns OCT (Wylie), 16 Jun 43, sub: Relationship between 4th Zone and 4th SvC. Both in OCT 020 Org of TC.

[53] Memo for record by 2d ZTO giving views of representative of Contl Div ASF, expressed during visit to 2d Zone, 1 Apr 43, OCT HB TZ Gen Proceedings; SvC Conf, Chicago, 22–24 Jul 43, pp. 9–11, 95–104, 110–12, WD Library. Latter reference appertains to all Class IV installations, not only those of TC.

[54] 1st Ind, CofT for CG SOS, 9 Mar 43, OCT HB Gross TZ's; Memo, sub: Arguments in Favor of Retaining TZ's under Direct Contl of CofT, prepared in OCT for use of CofT at Sv Comdrs Conf, 22–24 Jul 43, OCT HB Gross TZ's; Proceedings of ZTO Conf, 24–26 Sep 43, p. 8, OCT HB TZ Gen.

[55] SvC Conf, p. 104, cited n. 53.

the staffs of the corresponding service commands.[56]

In addition to the installations and activities which were assigned to them initially, the zone transportation officers acquired other responsibilities. In order to protect military and other government personnel traveling on official business from delays due to inability to obtain reserved accommodations, the railroads began during 1942 to set aside blocks of space for the use of such travelers. This arrangement did not fully meet the military needs, however, and during the summer of 1943 the Chief of Transportation established a chain of Army reservation bureaus. These bureaus, which eventually were located in more than forty important railroad centers throughout the country, were attached to other TC field installations for operation.[57] In October 1943 more than forty open storage yards, which were operated by the railroads for the accommodation of Army equipment, were transferred for purposes of operational supervision from The Quartermaster General to the Chief of Transportation, who delegated certain inspection responsibilities to the zones.[58] The Chief of Transportation delegated to the zone transportation officers certain responsibilities in connection with the operation and maintenance of utility railroads at Army installations, the operation of Army railroad repair shops, the assignment of Army-owned buses to local transportation services in the vicinity of Army installations and war industries, and the assignment and utilization of the great variety of administrative vehicles required by Army installations, except those of the Air Forces.[59]

The zone transportation organizations were concerned with all phases of traffic movement. In addition to the basic functions of the port agencies, the regulating stations, the holding and reconsignment points, and the consolidated car service, a wide range of duties was performed by transportation experts in the zone and district offices.[60] These men took precautions to avoid congestion at important traffic centers, investigated the causes of slow deliveries, gave special attention to movements which required expediting, worked with the transportation officers at Army installations and with the carriers to assure that the former's requirements of rail and motor equipment were promptly met, endeavored to correct practices at Army installations which resulted in the useless detention of cars and motor vehicles, and coached the transportation officers at Army installations in the techniques of full loading, proper documentation, and the correct routing of such shipments as were routed locally. The zone and district offices maintained an information service on highway conditions to aid the motor carriers in routing their vehicles and assisted them in procuring spare parts, obtaining competent operating personnel, and enforcing proper standards of maintenance. They also assisted the motor carriers in complying with state laws or in overcoming obstacles created by dissimilar regulations regarding the weights and

[56] Memo, Exec OCT for ACofT, C's of Divs, etc., 10 Dec 43; Memo, Exec OCT for 1st ZTO, 17 Nov 43, and Incls. Both in OCT 020 Reorg of TC Field Installations. See also OCT Cir 125-1, C 1, 21 Sep 44, sub: ZTO's.

[57] WD Cir 40, Sec. I, 4 Feb 43; WD Memo W 55-40-43, 24 Aug 43, sub: Army Reservation Bureau; WD Cir 396, Sec. I, 7 Oct 44.

[58] ASF Cir 89, Sec. II, 25 Sep 43; OCT Cir 124, 4 Oct 43, sub: Insp of TC Stor Areas.

[59] These functions are detailed in Ch. X of this volume.

[60] Zone and District Transportation Officers' Guide, Secs. 110.1, and 110.2, Nov 43, OCT HB TZ Gen.

TRANSPORTATION CORPS FIELD INSTALLATIONS *supervised by the zone transportation officers. Railroad open storage yard at South Plainfield, N. J. (top). Aerial view of the Elmira Holding and Reconsignment Point, N. Y. (bottom).*

measurements of vehicles permitted to use the highways. They aided the oversea supply divisions at ports of embarkation in maintaining their shipping schedules by investigating the causes for delayed shipments from technical service depots or contractors' plants to the ports, and delays in informing the ports of the nonavailability of requisitioned items. Toward the close of the war the first, second, and fourth zones had air freight regulating officers stationed at aerial ports of embarkation, which were operated by the Army Air Forces, to supervise the movement of oversea shipments of the Army Service Forces through those ports.[61]

In the Chief of Transportation's opinion, aiding the transportation officers at posts, camps, and stations to perform their duties efficiently and in accordance with the regulations was an important function of the zone organizations. Errors made at points where troop and supply movements originated might result in delay, confusion, and added expense. Some local transportation officers had little experience as background for their work, which involved complicated and technical procedures and frequently had to be performed under pressure. Yet in giving this aid the zone transportation officers worked under handicaps. The local transportation officers were responsible in the first instance to the commanders of the installations. The commanders of Class I and Class II installations were responsible to the service commanders, and after the zone transportation officers had been appointed to the service command staffs they were in a position to give direct supervision to the transportation activities at such installations, although in so doing they were subject to the policies of the service commanders which sometimes were at variance with the instructions issued by the Chief of Transportation. Class III installations were under the control exclusively of the Army Air Forces and in dealing with them the Chief of Transportation's field representatives were limited to offering suggestions. The commanders of Class IV installations were responsible to the chiefs of the respective technical services, and the zone transportation officers therefore lacked authority to take direct action affecting their operations, except of course in the case of Transportation Corps installations.[62]

Under these circumstances the ability of the zone transportation officers to bring the practices of local transportation officers into harmony with the policies and procedures prescribed by the Chief of Transportation varied according to the type of installation and was dependent in many instances on the cordiality of the personal relations which existed between the zone officers and the installation and service commanders. While much was accomplished through the establishment of such relations, it is noteworthy that postwar reports submitted by the second and sixth transportation zones, where the officers in charge were of broad experience and unquestioned competence and where the relations with the service commands were satisfactory from the beginning, stressed the handicap under which they worked. Because of lack of authority to deal directly and positively with all local transportation officers they experienced great difficulty in establishing uniform practices

[61] WD Cir. 75, Sec. II, 8 Mar 45. The first air freight regulating officer began functioning for 2d zone in Nov 44. See 2d zone hist rpt for last quarter 44, OCT HB 2d TZ.

[62] AR 55–5, par 5*b*, 5 Oct 42. At the end of the war, ASF Cir 312, 16 Aug 45, sub: Responsibility —CG's of SvC's at Class IV installations, placed Class IV installations in same relationship to service commanders as Classes I and II.

and a co-ordinated transportation program.[63]

From the time of their establishment until March 1945 all of the zone transportation offices and some of the district offices included supply divisions which performed a wide range of functions in connection with the Transportation Corps procurement program.[64] The zone supply officers maintained up-to-date records of the qualifications and past performances of contractors for guidance in future procurement. Although the bulk of the actual contracting was done by the Office of the Chief of Transportation, the zone supply officers placed orders for component parts and materials as authorized by the Director of Supply. They supervised the performances of contractors located in their respective zones, making inspections to enforce specifications, assisting contractors in maintaining production schedules, and eventually testing and accepting the finished products. They established the requirements of contractors in connection with the administration of the controlled materials plan. They represented the Chief of Transportation in proceedings connected with the termination of contracts and the disposition of termination inventories. They supervised the distribution and utilization of equipment furnished to contractors by the government. They exercised general supervision over the operation of the Transportation Corps depots, which were located at holding and reconsignment points and were subject to the direct supervision of the commanders of the "points" in operational matters. Both the procurement and depot responsibilities were divorced from the transportation zones in the spring of 1945, under circumstances which will be more fully explained in the next section.

The transportation zones and districts had industrial relations officers who functioned in accordance with policies and practices approved by the Chief of Transportation.[65] They kept the manpower situation under close observation. They endeavored to forestall strikes at manufacturing plants which were working on Transportation Corps contracts or in the transportation industry. When work stoppages occurred, they sought to effect prompt settlement of the disputes by informally bringing the parties together or by enlisting the services of federal or state agencies having legal authority to deal with such matters. The industrial relations officers in the zones also assisted contractors in meeting their manpower problems by proposing methods for improving the utilization and the efficiency of the labor on hand and by supporting the contractors' efforts to bring additional labor to their plants when that seemed to be the only way of keeping up with production schedules.

At the time of the establishment of the transportation zones, it was recognized that an approximation of uniformity in organization was desirable, but that complete uniformity was not practicable because of the variation in the functions performed in the several areas.[66] Nevertheless, typical organization charts were issued from time to time

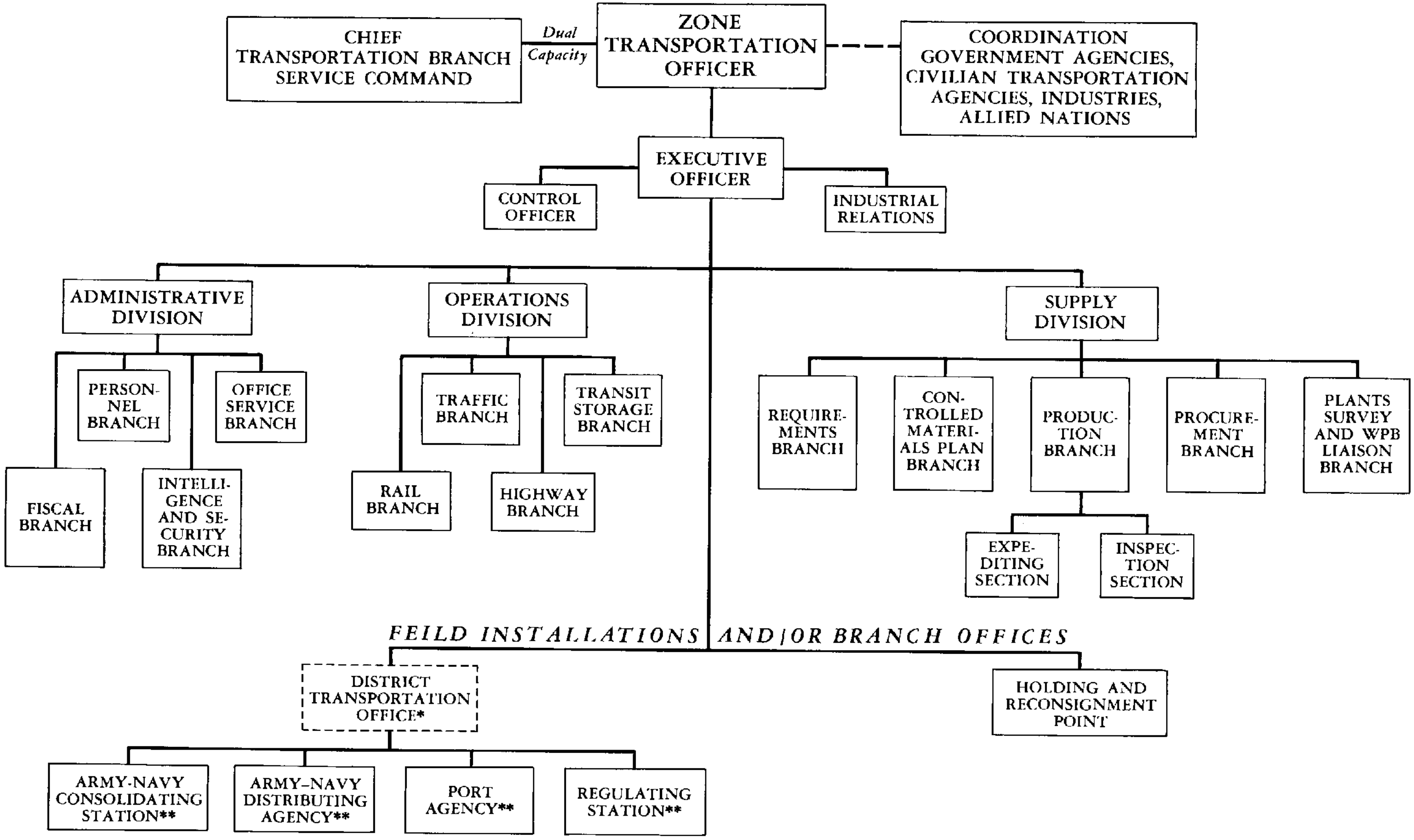
[63] Memo, 2d ZTO for CofT, 20 Sep 45, OCT HB 2d TZ; Memo, 6th ZTO for OCT, 18 Sep 45, p. 10; Ltr, 6th ZTO to Exec Asst OCT, 2 Nov 45. Last two in OCT HB 6th TZ.

[64] Zone and District Transportation Officers' Guide, Sec. 115.1, Nov 43, OCT HB TZ Gen.

[65] OCT Cir 21, 9 Feb 43, sub: Estab of Port and Zone Ind Relations Div; TC Cir 5-2, 1 Jan 44, same sub; Zone and District Transportation Officers' Guide, Sec. 110.6, Nov 43, OCT HB TZ Gen.

[66] Instruction 5-1, Operation and Instruction Manual, Zone and District Transportation Officers, 22 Dec 42, OCT HB TZ Gen.

CHART 4—TYPICAL ORGANIZATION FOR ZONE TRANSPORTATION OFFICES, APPROVED BY THE CHIEF OF TRANSPORTATION, ARMY SERVICE FORCES: NOVEMBER 1943.



*District office may or may not intervene between agencies shown below and zone headquarters.

**When directly under zone offices these installations become branch offices.

Source: Zone and District Transportation Officers' Guide, November 1943.

for the guidance of both zone and district officers. The zone chart published in the Zone and District Transportation Officers' Guide in November 1943 gives the most complete picture of the activities which the zones carried on during the greater part of their existence, and for that reason it is shown here as Chart 4. It is to be noted that the railroad repair shops had not been designated Transportation Corps field installations at that time, and that later they occupied a position in the zone organization similar to that of the holding and reconsignment points. The last wartime revision of the typical zone chart, issued 20 March 1945, shows considerable simplification of organization and omits the supply division which then was scheduled for deletion from the zone structure.[67]

At the close of hostilities the transportation zones included the nine zone transportation offices and sixty-seven subordinate installations. The latter number does not take the reservation bureaus into account since they were attached to other TC installations, nor does it include the railroad open storage yards which were operated by the railroads rather than the Transportation Corps. By that time (August 1945) all port agencies and regulating stations had been merged with or redesignated district transportation offices or branch offices. The territories embraced in the transportation zones and the names of the zone transportation officers at different times during the war are shown in Appendix C. The types and locations of the subordinate installations at the end of the war are shown in Appendix D.

The personnel of the zone transportation offices and their subordinate installations on

[67] Copy of chart in OCT HB TZ Gen. See OCT HB files for respective zones for charts showing variations from typical organization.

TABLE 3—DISTRIBUTION OF PERSONNEL AMONG TRANSPORTATION ZONES: 31 MARCH 1945[a]

Zone Number and Headquarters	Total	Military	Civilian (Directly employed)
All Zones	9,625	1,204	8,421
I Boston, Mass.	114	38	76
II New York, N.Y.	2,295	189	2,106
III Baltimore, Md.	1,933	190	1,743
IV Atlanta, Ga.	1,146	133	1,013
V Columbus, Ohio	416	68	348
VI Chicago, Ill.	482	83	399
VII Omaha, Nebr.	273	69	204
VIII Dallas, Texas	583	87	496
IX Salt Lake City, Utah	2,383	347	2,036

[a] Data not available for contractors' personnel and prisoners of war employed at installations under the zone transportation officers. Supply divisions were still included in the zone organization, but were soon to be transferred.

Source: Rpt, TC Personnel, 31 Mar 45, by Dir of Pers OCT, OCT HB Dir of Pers, Pers Statistics.

31 March 1945, including military personnel and civilians directly employed, totaled 9,625 (see Table 3). This figure does not include contractors' personnel and prisoners of war who performed transportation tasks at some of the installations. Exact data for such personnel are not available, but an estimate based on fragmentary data indicates that the total did not exceed 5,000. Assuming that the activities embraced in the transportation zones employed between 14,000 and 15,000, the number is small when compared with the personnel employed at ports of embarkation (171,000 on 31 December 1944). The comparison calls attention to the fact that the work of the transportation zones was mainly administrative and supervisory, while the work at the ports was mainly operational.

Other Field Agencies

While ports of embarkation and the transportation zones embraced the field agencies which were concerned directly with transportation and traffic, the Chief of Transportation's field establishment included a number of other activities. Those activities were concerned with the training of Transportation Corps personnel and the design, procurement, and distribution of Transportation Corps matériel. Some of them were placed under the supervision of port commanders or zone transportation officers because those officers were qualified by experience, or were favorably located, to give effective direction to the work.

The first Transportation Corps unit training center was established at the Indiantown Gap Military Reservation in Pennsylvania in July 1942, primarily to supplement the ports of embarkation in the training of port battalions. Initially the commander of the New York Port of Embarkation was in command of this activity, but control later passed to the Third Service Command. In January 1943 a Transportation Corps unit training center was established at New Orleans to train various types of units and it remained under the commander of the New Orleans Port of Embarkation throughout the war.[68] These installations later were redesignated Army Service Forces unit training centers, but the Chief of Transportation continued to be responsible for the establishment of training doctrine, programs, and quotas for Transportation Corps units, and for conducting inspections to determine the technical progress of units in training.[69]

While the headquarters of the Military Railway Service was stationed at Fort Snelling, Minn., it supervised the training of railway troops, but when that headquarters was moved to North Africa in the winter of 1943 the responsibility for such training was assigned to the commander of the New Orleans Port of Embarkation.[70] The basic military training of such troops was given at the New Orleans unit training center (later named Camp Plauché), except when the program exceeded the capacity of that facility, in which case Fort Sam Houston, Tex., handled the overflow.[71] Most railway units received their technical and unit train-

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[68] Memo, CofT for CG SOS, 10 Jun 42, sub: Estab of UTC, OCT 323.5 Misc 1942; Memo, CofT for CG NYPE, 11 Jul 42, OCT 353 Indiantown Gap; Memo, TAG for CG SOS, CofT, etc., 10 Nov 42, AG 320.2 (11-1-42) SOS UTC New Orleans; Memo, TAG for CG 3d SvC, CofT, etc., 3 Jan 43, AG 320.3 (12-31-42) TC UTC.

[69] ASF Cir 104, Sec. III, 15 Apr 44; ASF Cir 135, Sec. IV, 11 May 44.

[70] OCT Cir 49, 5 Apr 43, sub: Tng of Ry Trs.

[71] Memo, Rail Div OCT (Holland) for Hist Unit OCT, 16 Sep 44, sub: Tech and Mil Tng Sites, OCT HB Tng Div Unit Tng; TC Cir 35-4, 1 Jan 44, sub: Tng of Ry Trs.

ing on the right of ways and in the shops of commercial railroads, but a few were trained on the Claiborne and Polk Military Railway, a 50-mile stretch of track in Louisiana built by the Army specifically for training purposes. Railway replacements received technical training at different times at Camp Claiborne, La., Camp Shelby, Miss., and Fort Francis E. Warren, Wyo. Late in the war, with the training task largely completed, all training of railway troops, aside from that conducted on the commercial railroads, was transferred to Fort Francis E. Warren.

In the spring of 1943 the Chief of Transportation began to train personnel for the operation and maintenance of small boats and amphibian trucks at Charleston, S. C., under the control of the commander of the Charleston Port of Embarkation.[72] Late in that year these activities were transferred to a newly established ASF training center at Camp Gordon Johnston in Florida, where more adequate facilities were available. At Camp Gordon Johnston the training of both units and replacements was under the operational control of the Fourth Service Command, but the Chief of Transportation was responsible for training doctrines and programs.

Several schools for the training of officers and officer candidates were operated by the Chief of Transportation. In October 1942 the Atlantic Coast Transportation Corps Officer Training School was established at Fort Slocum under the control of the commander of the New York Port of Embarkation, and at the same time its Pacific coast counterpart was established at Camp Stoneman under the commander of the San Francisco Port of Embarkation.[73] Both were discontinued during 1944, after the establishment of the Transportation Corps School at the New Orleans Air Base under the command of the commander of the New Orleans Port of Embarkation. The Transportation Corps Officer Candidate School originally was located at Mississippi State College but was transferred to the New Orleans Staging Area and placed under the command of the commander of the New Orleans Port of Embarkation in June 1943.[74] It was moved to the New Orleans Air Base the following February and became the Officer Candidate Department of the Transportation Corps School.

A Transportation Corps school for civilian marine officer cadets was established at St. Petersburg, Fla., in August 1943. Its purpose was to train cadets to the point where they could be commissioned and assigned to harbor craft companies or assigned as civilian officers to ocean-going Transportation Corps vessels.[75] This training activity continued at St. Petersburg until April 1945, when it was transferred to New Orleans and became part of the civilian marine school which was conducted by the commander of the New Orleans Port of Embarkation. In both locations it was under the operational control of the Chief of Transportation.

The depots which stored and issued Transportation Corps equipment and sup-

[72] Hist Rpt, Mil Tng Div OCT, Feb 45, sub: Tng of Units, pp. 15, 41, OCT HB Tng Div Rpts.

[73] OCT Tng Memo 2, 14 Sep 42, OCT HB Tng Div Offs Schools; TC Cir 35-1, 25 Feb 44, sub: TC School.

[74] WD Memo W 350-6-43, 7 Jan 43, sub: Transfer of Adm OCS 4; TC OCS SO 134, 25 Jun 43, OCT HB Tng Div OCS; TC Cir 35-1, 25 Feb 44, sub: TC School.

[75] Annual Rpt, Dir of Pers, FY 1944, section on industrial personnel, p. 13; OCT Misc Ltr 150, 7 May 45, sub: TC Marine Off Cadet School. Both in OCT HB Ind Pers Div Tng Civ Marine Pers.

plies occupied space at holding and reconsignment points. During the greater part of the war they were operated by the commanders of those installations, under the general supervision of the zone transportation officers, and in accordance with policies and procedures established by the Director of Supply in the Office of the Chief of Transportation.[76] In January 1945 the depots were made independent of the zones and responsible directly to the Distribution Division in the office of the Director of Supply, but the commanders of the holding and reconsignment points continued to perform certain administrative and housekeeping functions for them.[77] The depots then were located in four holding and reconsignment points—Marietta, Pa., Voorheesville, N. Y., Montgomery, Ala., and Lathrop, Calif.; subdepots had been established at the Auburn, Wash., and Yermo, Calif., holding and reconsignment points, and other subdepots were contemplated. In view of the increasing number of depots and the growing volume of matériel handled, as well as complications anticipated in connection with the shift of emphasis from Europe to the Pacific, centralization of control under the Director of Supply was considered desirable in the interest of uniformity of operating methods and over-all co-ordination.

The decision to place a supply division in each of the nine zone transportation offices at the time of their establishment in December 1942, and also in many of the district transportation offices, was inspired by the greatly increased supply program which then confronted the Chief of Transportation, the multiplicity of contractors utilized by the Transportation Corps, the limited experience and inadequate facilities possessed by many of those contractors, and the obvious need for close supervision over contractors to enforce specifications and maintain production schedules. After the Transportation Corps supply organization and program had become better established and the major production problems had been met, it was found feasible and economical to reduce the number of supply offices in the field.[78] Accordingly, in March 1945 the Chief of Transportation announced that the supply divisions of the zone and district offices would be taken over by four new area procurement offices as rapidly as practicable. The new offices, located in New York, Chicago, New Orleans, and San Francisco, were attached to the second, sixth, eighth, and ninth zone transportation offices for administrative purposes, and except at New Orleans the zone transportation officer was also the area procurement officer. Basically, however, the area procurement offices were independent field installations and the officers in charge were responsible directly to the Procurement Division, which functioned under the Director of Supply in the Office of the Chief of Transportation.

During the greater part of the war, research and development were conducted by the several operating and technical divisions of the Office of the Chief of Transportation as well as by the ports of embarkation, but in January 1945 the Chief of Transportation established the Transportation Corps Board to give added impetus to this work.[79]

[76] TC Cir 5-11 rev., 6 Dec 44, sub: TC Depots; TC Pamphlet 1, Org Manual, Sec. 102.04 rev., 1 Jul 44.

[77] TC Cir 5-11 rev., 19 Jan 45; TC Pamphlet 1, Org Manual, Sec. 210 rev., 15 Mar 45.

[78] Memo, CofS ASF for CofT, 15 Feb 45, sub: TC Procurement, OCT HB Supply Org; TC Cir 5-8, 9 Mar 45, sub: Consolidation of Zone and Dist Procurement Offices.

[79] TC Cir 5-7, 17 Jan 45, sub: TC Bd; Hist of TC Bd, prepared at Fort Monroe and submitted to CofT, 22 Jun 45, OCT HB TC Bd.

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The board was to deal with a wider range of projects and to assure more thorough technical treatment for each. It was to develop not only improved designs and specifications for Transportation Corps equipment and supplies but also better training programs and operating procedures. This new field agency was situated at Fort Monroe, Va., and was responsible directly to the Chief of Transportation.

Supervision by Headquarters

A close supervision was exercised over the field installations by the Office of the Chief of Transportation, extending to all phases of their activity. The supervision included establishment of policies and procedures to improve efficiency and maintain basic uniformity among the several installations, control of the acquisition of facilities and personnel to keep them in proper relation to the amount of work to be performed, and analysis of results to determine whether they measured up to the desired standards. Although the Chief of Transportation himself took an active interest in the functioning of the field agencies, approved the major policies and procedures laid down for them, and followed the reports of their accomplishments from month to month, direct responsibility for supervision rested with the directors and divisions of his office.

With regard to technical matters relating to transportation operations, military training, and the various aspects of supply, the Chief of Transportation expected his headquarters to keep the field installations under close observation and assist them wherever necessary with expert knowledge and guidance. It was General Gross' policy, however, that supervision should not be carried to the point of stifling the initiative of the men in the field. Since technical supervision is discussed elsewhere, this brief review is confined to what broadly may be termed administrative supervision.

The Director of Operations, in addition to co-ordinating the actual handling of movements by the field installations, was concerned with the readiness of the installations to perform their tasks and with the distribution of the work load. He forecast the volume of troop and freight movements and notified the field agencies what their respective shares would be. In this he was aided by the Planning Division. He developed with the respective installations the additions or reductions to be made in plants, equipment, and personnel in view of prospective increases or decreases in their work loads. The Port and Field Agencies Division did the detailed work on such matters. The Director of Operations kept informed regarding conditions at important inland traffic centers and at the port staging areas and steamship terminals, and endeavored to keep the flow of traffic evenly distributed so as to avoid congestion at any point. In this activity he was assisted by the Movements Division with respect to troop traffic and by the War Department delegate to the interdepartmental Transportation Control Committee with respect to freight traffic.

The constantly increasing volume of work to be handled by the Transportation Corps and the manpower shortage throughout the nation necessitated very close supervision by the Chief of Transportation of all personnel matters affecting the field installations.[80] The Director of Personnel was responsible for such supervision, and he was assisted by

[80] For over-all discussion of pers adm see Annual Rpt, Dir of Pers, FY 1944, and Rpts, Mil Pers Div and Ind Pers Div for FY 1945, OCT HB files, Dir of Pers, Mil Pers Div, Ind Pers Div.

the Military Personnel Division and the Industrial Personnel Division. He scrutinized the requests for personnel in the light of the Transportation Corps' over-all authorization and the prospective work load of the respective installations, and issued authorizations accordingly. Personnel survey teams were sent throughout the field to determine whether officers and civilians were being used efficiently and to propose improvements. In accordance with ASF policies, methods of work measurement were developed by which the efficiency of particular groups was determined.[81] Monthly indices were computed, based on January 1943 as 100, to show the relationship between operating personnel and work load for the Transportation Corps in the zone of interior. The fact that the work load index for June 1945 was 363 whereas the operating personnel index was only 151 indicates that the per capita work output increased substantially during this period.[82]

With regard to military personnel, the basic problem during the greater part of the war was to keep the field installations supplied with enough officers and enlisted men of proper grades and qualifications to fill the positions for which military personnel was considered the more desirable. The supply of officer personnel was a constant problem, because of the numbers withdrawn from the field installations to meet the requests of theater commanders. As pointed out by Lt. Col. (later Col.) Aram Kojassar, Chief of the Military Personnel Division, the Chief of Transportation used far more enlisted men as operating personnel than any other technical service, and more than any of the service commands. Of the 58,000 enlisted operating personnel assigned to TC installations at the end of April 1944, more than 48 percent were eligible for oversea assignment. The Chief of Transportation's military personnel situation, therefore, was deeply affected by the War Department's edict in 1944 that officers and enlisted men capable of general service be sent overseas.[83] The release of these men and their replacement with limited service men, Wacs, civilians, prisoners of war, and Italian service units was a matter which required close attention and energetic efforts at headquarters.

Because of the heavy turnover of officer personnel at Transportation Corps field installations, care was necessary to insure that officers were assigned to the jobs for which they were best fitted. Qualification records and duty assignments were studied by a team of officers from headquarters, and reassignments were recommended when circumstances warranted. During the fiscal year 1944, 387 misassignments were corrected in this manner.[84]

Civilian personnel management at the field installations came under the supervision of the Chief of Transportation's Industrial Personnel Division. The problems were acute. The setting up of jobs and the assignment of personnel in the rapidly growing organizations were frequently done

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[81] ASF Manual M703-5, Jan 45, sub: Work Measurement; TC Pamphlet 14 rev., 15 Sep 45, sub: same.

[82] ASF MPR Sec. 3, Jun 45, p. 32. Work load index was based on volume of outbound and inbound passenger and freight traffic handled by PE's. Operating personnel index was based on military and civilian personnel employed by TC in ZI, excluding troops in training and personnel on vessels in transoceanic service.

[83] Statement of Kojasser at Port and Zone Conf, 6-9 Jul 44, morning meeting of 8 Jul, p. 4, OCT HB PE Gen Port Comdrs Conf; ASF MPR, Sec. 5, 30 Apr 44, p. 29. Nearly all TC enlisted operating personnel were at the ports.

[84] Annual Rpt, CofT, FY 1944, p. 64, OCT HB TC Gen Rpts.

in haste, with resulting inequalities and dissatisfaction. The competition of other and more remunerative employment was increasingly severe, so that the turnover of employees was heavy. Relations with the maritime labor unions called for great circumspection. The personnel officers in the field were coached in the rudiments of good management. Training was furnished to the men who served as classification analysts in order that job classification would proceed on a uniform basis. A wage administration manual was prepared to assist in the maintenance of uniform procedures. Classes were organized to improve the efficiency of employees, fit them for promotion, and diminish the temptation to look for jobs elsewhere. Incentives to improve effort and build up morale were introduced. A detailed set of regulations was promulgated by the Industrial Personnel Division to govern all aspects of the employment of marine personnel and promote the maintenance of harmonious labor relations in that important field.

The Chief of Transportation was not made responsible for intelligence and security at the field installations under his command when his office was created in March 1942; that responsibility rested first with the corps areas and later with the service commands. The arrangement did not work out satisfactorily at the ports of embarkation, however, and step by step the port commanders assumed direct control of these functions.[85] The port installations embraced a wide variety of activities of a specialized nature, which were not found at other Army stations and hence were not familiar to the service command personnel. Special knowledge and training were necessary for the proper protection of water-front facilities, for the inspection of ships, for dealing with longshore and marine labor, for indoctrinating troops at staging areas in preparation for their ocean voyage and arrival overseas, and for obtaining information of value to the Transportation Corps from military and civilian passengers and prisoners of war arriving from the theaters. The port commanders were in the best position to select and train personnel for these purposes, and to provide the facilities required by their work. Near the end of the war the port personnel dealing with such matters included 170 fire companies, 6,000 military police, 7,000 auxiliary military police (militarized civilian guards), and 200 investigators.

Supervision of these activities at the ports rested with the Intelligence and Security Division in the Office of the Chief of Transportation.[86] During the fiscal year 1945 the division reviewed 5,900 positive intelligence reports and disseminated the useful information gained from them, supervised the procedures employed for the military censorship indoctrination of almost 2,000,000 troops passing through the port staging areas en route overseas, and exercised staff supervision over the training of 286 officers in censorship schools. The division dealt in a supervisory way with such matters as character investigations of civilian employees, investigations into alleged subversive activities, collection of information regarding war crimes from returning troops and prisoners of war, and indoctrination of returning troops in the safeguarding of military information. As the agency responsible for internal security, it had oversight of the

[85] Gross final rpt, p. 118.

[86] See Hist Rpt, Int and Security Div, FY 1945, OCT Int and Security Div.

preparation of fire regulations, the operation of fire-fighting schools, the organization and equipment of emergency riot forces, the training of military police, and the development of antipilferage measures. Its technical intelligence functions included surveillance of the handling of classified documents and the transmission of confidential shipping information by telephone, dissemination of technical transportation information gathered from captured enemy documents, and the procurement of captured German transportation equipment for study by the Transportation Corps School. Utilizing two inspectors on the Atlantic and Gulf coasts and two on the Pacific coast, the division carried out 175 inspections at the ports during the fiscal year 1945, which resulted in 800 recommendations dealing with the details of intelligence and security arrangements.

Safety at the ports of embarkation also was a responsibility of the Intelligence and Security Division. A number of the port occupations were hazardous, especially that of the longshoremen, and the hazard was increased by the necessity of night work and the pressure to meet convoy sailing dates. The problem was attacked from all angles, including the education of workmen in the necessity for care, specific training in the avoidance of accidents, the establishment of accident prevention rules, and the installation and testing of safety devices. Substantial results were achieved by this program, which was given special impetus beginning in 1944 when all activity at the ports was intensified. In 1943 the accident frequency rate (number of time-loss injuries per million man-hours worked) for all War Department personnel at ports of embarkation was 20.38, in 1944 it was 14.08, and during the first five months of 1945 it was 12.66.[87] The accident frequency rate for military personnel at ports of embarkation (number of disabling injuries per 1,000 mean strength per year), which was 45.9 in July 1944, dropped to 36.9 in December 1944, and averaged 34.3 for the first five months of 1945. The motor vehicle safety program, which did not get under way until late in 1944, brought an improvement in the accident frequency rate for passenger cars and trucks (number of accidents per 100,000 miles of operation) from 3.94 in January 1945 to 2.73 in May.

The Control Division in the Office of the Chief of Transportation had a significant role in the supervision of the field installations. A major portion of its effort was devoted to keeping the Chief informed regarding the accomplishments and problems of the installations and assisting in the development of organizations and procedures to promote their effectiveness and efficiency. In accordance with General Somervell's policy, the larger field installations also had control divisions and the smaller ones had control officers, all of which functioned under the guidance of the Control Division at headquarters and assisted it in the performance of its task.[88] General Gross attached great importance to the work of this division, made it directly responsible to him, and encouraged it in the aggressive performance of its mission.

The monthly progress report prepared by the Control Division was a collection of statistical tabulations and charts, accompanied

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[87] *Ibid.*, pp. 18–19. Since the basis of computation is different, accident frequency rates for the several categories of employees are not to be compared.

[88] See Manual for Control Officers, prepared by Contl Div SOS, approximately Oct 42; OCT Cir 73, 2 Nov 42, sub: Estab of Contl Div in Field Installations.

by brief explanatory or interpretative notes, covering the more significant aspects of the Transportation Corps' activities.[89] The report regularly included studies of important phases of inland transportation, ocean transportation, port operation, and ship utilization, and periodically it included studies of other phases which were of particular interest at the moment. In addition to the monthly report, special and more detailed studies were prepared when they were needed to clear up problems. The data assembled by the Control Division provided a basis for comparing the several field installations from the standpoint of both operational and administrative efficiency. They were used in bringing to the attention of the installation commanders the features in which their commands appeared to be weak, and in proposing corrective measures. The data were assembled from many sources, including the installations themselves, the several divisions in the Office of the Chief of Transportation, and other agencies such as the War Shipping Administration, the Maritime Commission, the Combined Shipping Adjustment Board, the Transportation Control Committee, the Office of Defense Transportation, and the Association of American Railroads. Frequent visits to field installations by members of the Control Division provided data and general information not available through the routine reporting system.

The Control Division analyzed the methods and procedures by which the various elements of the Transportation Corps accomplished their missions and proposed improvements.[90] A generous part of its effort was devoted to procedures in connection with the marking and documenting of shipments, the oversea supply operations of the ports of embarkation, and the distribution of information regarding shipments and troop movements to all concerned. These were fields in which peacetime practices failed to meet the requirements of war. The late establishment and rapid expansion of the Transportation Corps gave little opportunity for study of such matters during the early part of hostilities, but such study was emphasized as the war progressed. The Control Division was aided by a procedures committee, which included representatives of other elements of the Office of the Chief of Transportation. Collaborating with the War Department Code Marking Policy Committee, the division aided in the development of a marking system which provided the information needed by shippers, consignees, carriers, and Transportation Corps installations, and yet preserved necessary security in the execution of troop and supply movements. It worked closely with Army Service Forces headquarters in the development of the War Department Shipping Document and the Vendor's Shipping Document, which provided the necessary papers for both domestic and oversea shipments, with reduced paper work and increased clarity. It worked with Army Service Forces headquarters and the Navy in the preparation of a manual which included uniform shipping procedures for the Army and the Navy where such

[89] ASF MPR, Sec. 3, Transportation. Although issued as ASF document, this report was prepared entirely in Contl Div OCT. Full set in OCT HB MPR.

[90] Memo, C of Contl Div for Exec Off OCT, 5 Nov 45, sub: Accomplishments and Handicaps, OCT HB Contl Div Rpts; TC Cir 5–9, 8 Feb 44, sub: TC Procedures Com; ASF M 401, 25 Jan 44, sub: WD Shipping Document; ASF M 410, 5 May 44, sub: Vendor's Shipping Document; WD TM–38–412, Mar 45, sub: U.S. Army and Navy Ocean Shipping Procedures.

were found practical, gave information regarding the methods of each service where uniformity could not be achieved, and provided for an adequate flow of information regarding Army and Navy troop and cargo movements to and within the theaters. The Control Division also developed and supervised a plan by which Transportation Corps officers at the ports and in the transportation zones took measures to insure compliance of Army depots and contractors with the complicated regulations relating to the packing and marking of shipments, the utilization of shipping documents, and other procedural matters.

Other activities of the Control Division which affected the field installations were its effort to reduce as much as possible the time-consuming compilation of recurrent reports and its supervision of a work simplification program. The latter program, which was initiated throughout the Army Service Forces in March 1943, was based on a study of individual and gang operations, for the purpose of eliminating unnecessary motions and improving the utilization of equipment in order to save man-hours. Several types of Transportation Corps installations provided good fields for this type of study, particularly the ports of embarkation and the holding and reconsignment points, which had extensive freight handling operations. Each installation was assigned a monthly quota of work simplification study to be accomplished, and was coached in the conduct of the activity. The results were gratifying. Jobs originally requiring an expenditure of 22,750,000 man-hours per month were analyzed, with a saving of 3,594,000 man-hours per month, or almost 16 percent.[91]

[91] See Manpower Utilization Report on Work Simplification, by ASF Contl Div, May 44, OCT HB Contl Div Procedures; Gross final rpt, p. 122.

With regard to the organizational structure of field installations, the records do not always indicate where the proposals for change originated. The effort for greater uniformity in the organization of the zone transportation offices originated in the Control Division. The effort to standardize the organization of the ports of embarkation appears to have originated in the office of the Director of Operations. Changes in the organization of the several types of installations functioning under the zone transportation officers often originated with the operating divisions which had the most direct interest in the functioning of those installations. In all cases, however, the Control Division studied and evaluated the proposals from the standpoint of their probable effect on efficiency.

General Gross considered periodical conferences between the key personnel of his office and the key officers of the port and zone establishments an important element of supervision. Numerous references will be found throughout this history to statements made and directions given at such conferences. They contributed substantially to the understanding which officers at headquarters and those in the field had of each other's problems and opinions. In particular they enabled the Chief of Transportation to determine by a frank exchange of views how far new policies and procedures could be imposed upon the field without disturbing unduly the smooth performance of their work. The conferences were held at about six-month intervals. The early meetings were called for either port or zone officers. Later, both attended the same conferences; they met jointly with the officers from headquarters to consider matters of common interest, and separately when matters of peculiar interest were discussed. During these

meetings General Gross arranged for personal and confidential talks with his field representatives, so that they might feel entirely free in presenting their problems, particularly in discussing the service and support which they were getting from the headquarters staff in Washington.

Demobilization Planning and Adjustments

Concrete planning for the adjustments to be made in the field establishment after the cessation of hostilities was initiated in the Transportation Corps, as in other elements of the Army Service Forces, more than a year before the Japanese capitulation.[92] This was a difficult problem for the Chief of Transportation, because of uncertainty regarding the rate of demobilization in the Army as a whole and the extent to which occupation forces would be retained overseas. It is not the intent to trace in this volume the intricate process by which the pertinent information was gathered and plans for the inactivation of Transportation Corps installations were evolved. It seems desirable, however, to note briefly the significant adjustments which took place during the demobilization period.

From the start of the planning for postwar adjustments it was foreseen that after the peak of the repatriation movement had been passed it would be feasible to inactivate all Army port installations except those at New York, New Orleans, San Francisco, and Seattle. Also, it was foreseen that the piers, warehouses, and other facilities which had been rented by the port commanders could be released rapidly, and in fact such release was begun well in advance of V-J Day.[93] The New York and San Francisco installations, it may be noted, were in operation when World War II began, and the New Orleans and Seattle installations were the first to be authorized during the emergency period. By the end of May 1946 the number of Army ports had been reduced to these four. Thereafter, the New York Port of Embarkation handled the bulk of the Army's transatlantic traffic; the New Orleans Port of Embarkation served the Panama Canal and the Caribbean bases, and loaded a large quantity of civilian relief supplies for Europe; the San Francisco Port of Embarkation handled the transpacific traffic; the Seattle Port of Embarkation was concerned principally with traffic to and from Alaska.

The abnormal wartime conditions responsible for the establishment of the installations which functioned under the supervision of the zone transportation officers abated rapidly after the termination of hostilities. Holding and reconsignment points, regulating stations, freight consolidating stations, freight distributing agencies, and reservation bureaus soon became unnecessary, and by April 1946 all had been inactivated or were scheduled for inactivation. Also, the work performed by the technical staffs of the zone and district offices greatly declined in volume. Accordingly, in the interest of economy, the transportation zones were consolidated with the service commands, effective 1 May 1946.[94] The transportation officers of the service commands thereafter acted as agents of the Chief of Transportation in the performance of functions for which he was responsible, and di-

[92] Memo, CofS ASF for CofT, 20 May 44, sub: Command Facilities; 1st Ind, CofT for CG ASF, 29 Jun 44. Both in OCT 323.31 Utilization of Command Facilities.

[93] See list of facilities released by TC up to 28 Feb 46, OCT HB Port and Field Agencies Div.

[94] ASF Cir 97, Sec. I, 18 Apr 46.

rect communication between the Chief of Transportation and those transportation officers regarding such matters was authorized. This relationship continued when, a few weeks later, the functions of the service commands were taken over by six newly created Army areas.[95] Although the zone transportation organization which the wartime Chief of Transportation had championed so vigorously thus lost its identity during the first year of postwar readjustment, the validity of the institution was reaffirmed in the Transportation Annex to the War Department Basic Plan of 1 October 1946, which provided for its re-establishment if another emergency should arise.[96]

As the number of active Army installations decreased, the amount of utility railway equipment in operation decreased correspondingly, and two of the four railroad repair shops were closed. The shops at Holabird and Ogden, which continued in operation, functioned directly under the supervision of the Office of the Chief of Transportation, rather than under the transportation officers of the Army areas.[97] Many of the railroad open storage yards continued to serve the Army under contracts arranged by the Chief of Transportation until early 1947, when thirty-three of them were declared surplus to the War Department and transferred to the control of the War Assets Administration.[98] The procurement offices at Chicago and New Orleans were inactivated in April 1946, and those at New York and San Francisco were attached to the ports of embarkation at those points, to continue the work of contract termination, contract settlement, and property disposal.[99] Of the seven depots and subdepots which were in operation at the close of hostilities, four were closed out promptly, leaving only the depots at Marietta, Voorheesville, and Lathrop in operation after 31 October 1945.[100] Eventually, all except the Marietta depot were discontinued, but the Transportation Corps also occupied sections of the five general distribution depots which were established under the Army's postwar depot plan, announced in May 1947.[101] The Transportation Corps Board continued to function as a permanent field installation, but was transferred from Fort Monroe to the New York Port of Embarkation in May 1946.

The arrangements for training Transportation Corps troops during the war presented several disadvantages which were corrected after V-J Day. One basic fault was that technical training for different types of units was given at different installations, which meant that units which were required to work together in the theaters, such as port companies, amphibian truck companies, and harbor boat companies, were not trained together in the zone of interior. Also, the Chief of Transportation believed that having certain training centers under the operational control of the service commands, as was the case during the latter part of the war, made it more difficult for his Military Training Division

[95] WD Cir 138, par. 6, 14 May 46.

[96] See Transportation Annex, par. 9h rev., 14 Jan 47.

[97] TC Cir 5-13 rev., 1 May 46, sub: Opn of TC RR Repair Shops.

[98] Memo, CofEngrs for CofT, 28 Feb 47, sub: RR Open Stor Yds Excess to WD; Memo, CofT for CofEngrs, 4 Mar 47. Both in OCT 619.5 Open Stor Yds.

[99] OCT Misc Ltr (Corrected), 25 Apr 46, sub: Changes . . . Procurement Offices, OCT HB Supply Org.

[100] Memo, Dir of Matériel and Supply OCT for C of Req and Dist Div OCT, 13 Sep 45, OCT HB Supply Depots.

[101] TC Cir 45-55-1, 18 Jul 47, sub: Postwar Depot System.

to establish methods and enforce standards than would have been the case if they had been under Transportation Corps control.[102] The suggestion was put forward early in 1944 that a single Transportation Corps unit training center be established, but it was not acted on at that time.[103] A concrete proposal to that end was placed before Army Service Forces headquarters in May 1945, with the recommendation that Fort Eustis, Va., be selected as the site for the activity. During the following January the Army Service Forces announced the establishment of an ASF training center at Fort Eustis, to be operated as a Class IV activity under the control of the Chief of Transportation. Two months later the Chief of Transportation arranged that the Transportation Corps School also should be moved to Fort Eustis. After the dissolution of the Army Service Forces, Fort Eustis functioned as a Transportation Corps installation embracing the Transportation Training Center and the Transportation School.[104]

[102] Gross final rpt, p. 114.

[103] Proceedings, Port Comdrs Conf, 11–14 Jan 44, I, 131–33, OCT HB PE Gen; Memo, CofT for Dir of Mil Tng ASF, 2 May 45, AG 354.1 (1945) Dir of Mil Tng; ASF Cir 11, Sec. II, 14 Jan 46; TC Cir 35-1 rev., 7 Mar 46, sub: TC School.

[104] WD Cir 294, 27 Sep 46.

CHAPTER V

The Critical Role of Shipping

Throughout the war the demand for ships exceeded the supply, with the result that from first to last ocean transportation was a persistent and sometimes a serious limiting factor to be dealt with in planning strategy and preparing for combat operations. This was true despite the fact that the submarine, which in the early stages seriously threatened our lines of communications, eventually was curbed and that the shipping losses suffered by the Allies were more than offset by the magnificent American shipbuilding achievement. In a war of such great proportions, the task of moving men and supplies between the zone of interior and the theaters of operation, and within the theaters, created a need for vessels which never was wholly satisfied. A careful co-ordination of military plans with anticipated shipping capabilities was therefore necessary. Even then, new developments frequently created unforeseen demands. This latter fact is illustrated by a statement of the British Prime Minister to the House of Commons late in February 1945. He said: "The reason why shipping is so tight at present is because the peak period of the war in Europe has been prolonged for a good many months beyond what was hoped last autumn, and meanwhile the peak period against Japan has been brought forward by American victories in the Pacific." [1]

At the outbreak of World War II the ocean-going merchant shipping of all nations, counting vessels of 1,000 gross tons or more, totaled 13,004 vessels of 59,078,000 gross tons, or 81,359,000 deadweight tons.[2] This represented a tonnage increase of more than 50 percent over the vessels of comparable size under all flags at the beginning of World War I.[3] The volume of shipping registered under the flags of the principal maritime nations on 1 September 1939 is shown below, and it is noteworthy that the United States and the British Empire between them controlled about 45 percent of the total deadweight of 81,359,000 given above for all nations:

[1] Quoted by Acting Secy State Joseph C. Grew, in "Our Global War," *Department of State Bulletin,* March 4, 1945, p. 329. In this address Mr. Grew said, "There is . . . a serious shortage of shipping. There has been ever since the beginning of the war and there probably will be a shortage until some months after the final defeat of the enemy."

[2] Statistical study, Merchant Fleets of the World, as of 1 Sep 39, prepared by Div of Economics and Statistics, Mar Com, 24 Aug 45. Vessels on Great Lakes and inland waterways, icebreakers and other specialized types excluded. Copy in OCT HB Topic Shipping Statistics—All Countries.

[3] Exactly comparable data are not found, but J. A. Salter, *Allied Shipping Control* (Oxford, 1921), p. 8, states that in midsummer 1914 world shipping of 1,600 gross tons or more totaled 8,445 vessels of 35,145,000 gross tons.

Nation	*No. of Vessels*	*Gross Tons*	*Deadweight Tons*
British Empire	3,424	18,028,953	24,174,000
United States	1,432	8,514,879	12,154,000
Japan	1,180	5,102,346	7,145,400
Norway	1,072	4,499,086	6,931,200
Germany	858	3,923,353	5,186,700
Italy	679	3,227,902	3,978,800
France	563	2,704,300	3,019,500
Netherlands	542	2,687,119	3,427,100
Sweden	484	1,311,763	2,033,100
Greece	436	1,697,988	2,791,000
Denmark	379	1,041,756	1,575,800
USSR	354	1,135,783	1,597,900

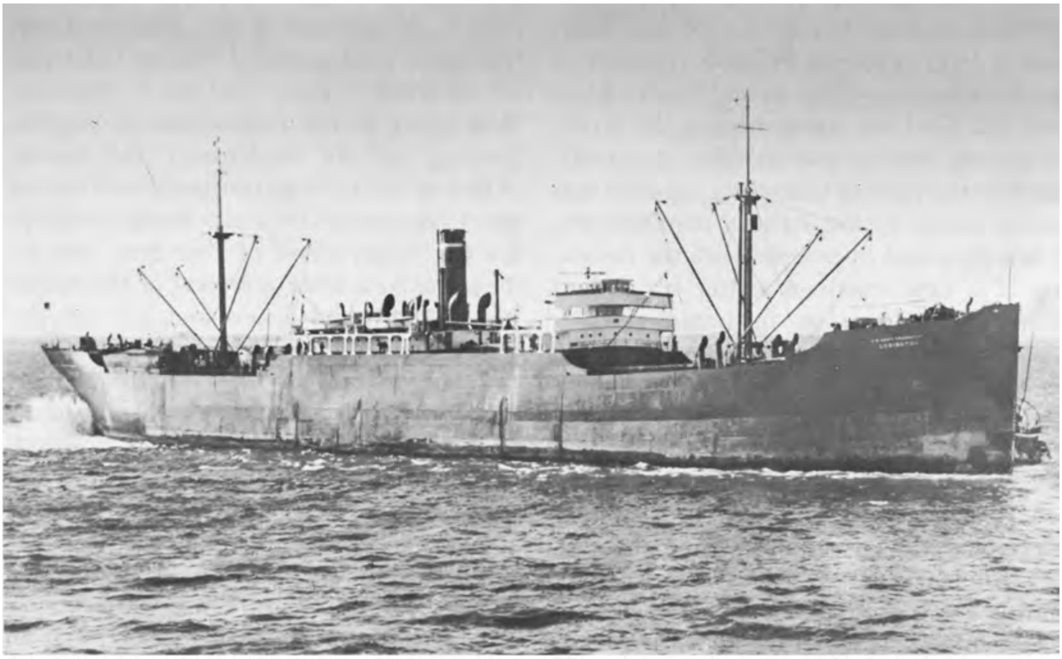
Although the United States ranked second among the maritime nations of the world in September 1939, it began feeling the effects of a shipping shortage long before it was forced to abandon the role of nonbelligerent. The war in Europe stimulated a demand for vessels throughout the world, with the result that American operators reached out into new services and foreign purchasers and charterers actively entered the market for American bottoms. The President's policy was to help the democracies with shipping as well as with supplies and equipment. The accelerated importation of strategic raw materials, for immediate use in the manufacture of munitions and for stockpiling against the day when the sources of those materials might be cut off, created additional demands for ocean-going vessels. On top of this came the increased transportation needs of the armed forces, which were engaged in building up oversea bases and otherwise preparing for eventualities.[4] Confronted with many competing demands for the limited number of vessels that were available, the Army and the Navy found shipping one of their major problems. The difficulties which they experienced in this field during the period of transition from peace to war throw interesting side lights on the nation's state of unpreparedness.

Early Military Requirements

The outbreak of war in Europe necessitated early adjustments in the Army's ocean transportation program. For several years prior to 1939 the Army Transport Service had operated six transports—four troopships and two freighters. Early in 1939 two additional troopships had been acquired as replacements for two which were outmoded and scheduled for decommissioning.[5] These vessels were operated by the New York and San Francisco Ports of Embarkation, in scheduled services between those ports and to Puerto Rico, the Panama Canal, Hawaii, and the Philippines.

[4] See *United States Maritime Commission Report to Congress for the Period Ended October 25, 1940*, pp. 1–2, 24–25; . . . *Period Ended October 25, 1941*, pp. 1–2, 34–36. Hereafter cited as *Mar Com Rpt.*

[5] Memo, QMG for CofS USA, 23 Jan 39, G–4/29717–26; Ltr, SW to Chm Mar Com, 13 Feb 39, G–4/29717–26; Memo, QMG for TAG, 20 Jul 39, sub: Army Trans Schedule for FY 1940, OCT 561 Army Transports. The small military establishment in Alaska was served chiefly by commercial carriers.



PREWAR ARMY TRANSPORTS. *The freighter,* Ludington, *in Army service since 1931 (top). The troop transport* U. S. Grant, *a former German vessel seized during World War I (bottom).*

Developments in Europe in the late summer of 1939 called for the early dispatch of reinforcements to Panama and Puerto Rico, and the need for strengthening the Army Transport Service was at once apparent.[6] Because the existing transports were old and poorly suited to the Army's requirements, it was proposed to proceed with the designing of a new vessel—a matter which had been under discussion for some time. A contract for the preparation of designs was let to a New York firm of marine architects and that work eventually was completed, but authority to construct the vessel was not requested. The immediacy of the need led to the acquisition by the Army of an additional old passenger vessel in November 1939 and an additional old freighter during the following month.[7] The plan to decommission two transports was changed and the vessels were returned to service after some reconditioning. At the end of 1939, therefore, the Army was operating seven troopships and three freighters.

That still was the status of the Army Transport Service when in May 1940 a sailing schedule for the ensuing fiscal year was approved.[8] The schedule soon was seen to be inadequate, because of the acceleration of the rearmament program which followed the German successes in northern and western Europe. Pursuant to conversations with members of the Advisory Commission to the Council of National Defense, which began in June 1940, the Secretary of War wrote to the Commission in August, pointing out the inadequacy and unsuitability of the existing transports and urging the Commission to make funds available for the construction of four new vessels.[9] This was in a sense a revival of the earlier proposal to build a new and specially designed transport, and it was contemplated that the designs for that vessel, which by then were well advanced, would be used. The Advisory Commission stated, however, that it had no funds for the purpose, and because of the urgency of the need the Army then turned its attention to the acquisition of vessels which could be utilized at once. A survey by The Quartermaster General of ships already in service, and an effort to obtain from the Maritime Commission the allocation of two vessels which were under construction, disclosed the difficulties involved in increasing the transport fleet—difficulties that were due to the great demand for ships in the world market and to the Army's lack of ready funds for the purpose.[10]

Action to increase the Army transport fleet substantially came late in 1940. A report was submitted by G–4 to the Chief of Staff in mid-November, showing the anticipated shipping requirements and capabilities, and recommending the acquisition of additional vessels. Within a few weeks an enlarged program was submitted, calling

[6] Memo, ACofS G–3 for TAG, 26 Aug 39, sub: Reinforcements to Panama, G–4/29717–30; Memo, G–3 for TAG, 5 Sep 39, sub: Trs to Puerto Rico, G–4/29717–30; Memo, ACofS G–4 for CofS USA, 9 Sep 39, sub: Specifications and Plans for New Army Transport; Memo, QMG for ACofS G–4, 21 Feb 40, sub: Employment of Sp Svs for Transport Cons. Last two in G–4/29717–31.

[7] Memo, QMG for ASW, 17 Nov 39, sub: Acquisition by WD of U.S. Ships, OCT 561 Army Transports; Memo, ACofS G–4 for CofS USA, 19 Oct 39, sub: SS *Ancon*, G–4/29717–30.

[8] 6th Ind, TAG for QMG, 25 May 40, G–4/29717–23.

[9] Ltr, SW to Chm Adv Com, 3 Aug 40, G–4/29717–41; Ltr, SW to Adv Com, 23 Aug 40; Ltr, Secy Adv Com to SW, 29 Aug 40. Last two in OCT 561 Army Transports.

[10] Memo, QMG for DCofS USA, 19 Sep 40, G–4/29717–44; Memo, ACofS G–4 for CofS USA, 23 Sep 40, sub: Army Transports, G–4/29717–26; Ltr, Chm Mar Com to SW, 18 Sep 40, AG 571.4 (7–11–40) Army Transports.

for the purchase and conversion of three passenger liners and one freighter, the charter and conversion of seven passenger ships and four freighters, the purchase of two small transports for use by the Alaska and Puerto Rico commands, and the reconditioning of existing transports to enable them to meet the requirements of the steamboat inspection service. The Secretary of War requested the President to authorize him to incur obligations totaling $17,508,800 for these purposes at once, stating that he did not consider it feasible to wait for Congressional action because of the backlog of traffic and the increasing scarcity of ships. The President indorsed this letter, "approved subject to O.K. by Budget Director." The latter official gave his approval.[11]

By early 1941 the seriousness of the world shipping shortage had been deeply impressed on all concerned and the need for a more closely knit national program was apparent. In February the President took specific steps to deal with the situation.[12] First, in a note addressed jointly to the Secretary of War, the Secretary of the Navy, and the Chairman of the Maritime Commission, he pointed out that the shortage was likely to increase in months to come and directed that the Army and the Navy take over "a minimum number of merchant ships" for their own use and insure that these ships "not be kept idle." A few days later the President instructed the Chairman of the Maritime Commission to co-ordinate the employment of American shipping carefully in order to obtain maximum utilization, to co-ordinate the acquisition and creation of additional ships and shipping facilities, and to aid the Office of Production Management by expediting the shipment of materials essential to its program.

In order to deal more effectively with these and related problems the Maritime Commission created a Division of Emergency Shipping, and gradually the commission's regulatory activities expanded.[13] Although it lacked authority for direct action, it soon began to exercise such influence as it possessed to check the rapid advance in berth and charter rates charged American shippers—a matter in which the Army as a large shipper took an active interest. The President's declaration of an unlimited emergency on 27 May 1941 placed in effect the commission's authority to requisition vessels of American registry, and Congress promptly authorized the utilization of foreign flag vessels which were lying idle in American harbors. The Ship Warrants Act, approved in July 1941, gave the commission effective means of controlling the employment of privately operated vessels of both American and foreign registry, and the rates charged, by the granting of priorities for the use of docking, repairing, and fueling facilities.[14]

The President's action in February 1941 reflected a suspicion that the Army and the Navy were acquiring vessels which they did not need immediately, or were not uti-

[11] Memo, G–4 for CofS USA, 14 Nov 40, sub: Water Trans; Memo, ACofS G–4 for CofS USA, 2 Dec 40, sub: Water Trans; Ltr, SW to the President, 4 Dec 40; Memo, SW for CofS USA, 14 Dec 40, sub: Expenditure for Water Trans. All in G–4/29717–41.

[12] Memo, 4 Feb 41; Ltr, 10 Feb 41. Both in G–4/29717–48.

[13] Mar Com Adm Order 37, Supp. 29, 28 Feb 41, OCT HB Mar Com Opns.

[14] Memos, Chm of Trans Adv Group for C of Trans Div OQMG (Cordiner), 6 Mar 41, and (Dillon), 4 Apr 41, OCT HB Mar Com Opns; Mar Com press release, 1 May 41, OCT HB Mar Com Opns; *Mar Com Rpt* for period ending October 25, 1941, pp. 7, 37; PL 101, 77th Cong., approved 6 Jun 41; PL 173, 77th Cong., approved 14 Jul 41.

lizing fully. A spokesman for the Maritime Commission had indicated that additional ships would be turned over to the Army only insofar as it could show that commercial vessels could not meet its requirements.[15] Mr. John M. Franklin, member of The Quartermaster General's Transportation Advisory Group, called attention to the advantages to be gained by operating the American merchant marine as a national pool under centralized control, rather than distributing the vessels among a number of agencies—a doctrine well supported by the experiences of World War I.[16]

The Army, however, had additional requirements which it considered minimum and continued to press for more ships. The chairman of the Transportation Advisory Group observed from the negotiations that there was a lack of understanding between the Army and the Maritime Commission and urged the adoption and enunciation of certain policies by the Army with a view to overcoming this handicap, including the policy of using commercial vessels for Army movements to the extent consistent with military requirements. Although space on commercial vessels was used increasingly, a clear statement of Army policy on the subject was not forthcoming. The War Department succeeded in obtaining additional vessels from the Maritime Commission, but not without difficulty. At the end of April 1941 the Army Transport Service was operating 26 ships, of which 24 were owned by the War Department and two were chartered.[17]

With the limited fleet under his control and with commercial space in great demand, The Quartermaster General was unable to move promptly the large amount of construction materials and the personnel which American contractors were required to send to the new Atlantic and Caribbean bases. This led the Chief of Engineers to propose, in the spring of 1941, that an exception to the regulation be made temporarily so as to permit his office to arrange for such movements.[18] This suggestion was opposed by G–4 on the ground that, with the prevailing scarcity of ships, the exercise of centralized control by The Quartermaster General was more than ever essential. As an alternative, the Chief of Engineers and the other supply services were directed to appoint special liaison officers from their traffic organizations to maintain contact with The Quartermaster General's newly established Traffic Control Branch, place before it as far in advance as possible the shipping requirements of their respective services, follow through on the handling of specific shipments, and investigate any complaints regarding delays to shipments, whether by rail or by water, which might be received from their field offices.[19] In an effort to increase his capacity for moving cargo to the Caribbean bases, The Quartermaster General explored the possibility of establishing barge services from New Or-

[15] Memo, C of Trans Div OQMG (Cordiner) for QMG (Gregory), 25 Jan 41, OCT 561 Army Transports.

[16] Ltr, Franklin to Chm of Trans Adv Group, 24 Jan 41; Memos, Chm Trans Adv Group for C of Trans Div OQMG (Cordiner), 6 Feb 41 and 19 Feb 41. All in G–4/29717–48.

[17] Memo, ACofS G–4 for CofS USA, 24 Mar 41, G–4/29717–56; 1st Ind, QMG to TIG, 30 Apr 41, OCT 561 Army Transports.

[18] Memo, CofEngrs for ACofS WPD, 27 Mar 41; Memo, ACofS G–4 for ACofS WPD, 3 Apr 41, G–4/32834; Memo, ACofS WPD for TAG, 7 Apr 41. All in WPD 4351–51 to 91.

[19] Memo, ACofS G–4 for TAG, 15 Apr 41, AG 210.69(4–9–41) Traf Contl; Memo, TAG for QMG etc., 17 Apr 41, OCT 020.

leans to certain Caribbean ports. Although the idea met with some favor it was not pursued to a conclusion because ocean-going barges and tugs were exceedingly scarce at that time.[20]

During 1941 the Army took other steps to insure that the utilization of its transports was in keeping with the generally stringent shipping situation. In March, in response to approaches from the Reconstruction Finance Corporation and the Maritime Commission, the War Department agreed to lift government rubber from the Far East on homeward transports, with the understanding that any loss of transport time would be compensated by the assignment of additional vessels, and a few months later this arrangement was extended to strategic government cargoes from the west coast of South America.[21] Subsequently the Judge Advocate General was requested to determine whether under emergency conditions it would be legal for Army transports to carry commercial passengers and cargoes when commercial space was not available, and an affirmative opinion was rendered.[22] In April Army Transport Service sailings between New York and San Francisco were ordered discontinued, the traffic between those ports to move by rail.[23] In June, because of the increasing number of military and civilian personnel stationed overseas and the scarcity of both passenger and cargo space, the transportation of dependents, household goods, and private automobiles to oversea stations by Army transports was discontinued.[24] In order to shorten the sea voyages to the Caribbean bases, the Panama Canal, and Alaska, and also to lighten the loads on the primary ports at New York and San Francisco, increasing use was made of the ports of Charleston, New Orleans, and Seattle.

Following up the action which he had taken earlier in the year, the President in July 1941 requested that the Army, the Navy, and the Maritime Commission make a joint investigation to determine whether the vessels operated by the military services were being utilized with maximum efficiency. The War Department pledged its full co-operation in such an investigation and submitted a list of its transports showing their current employment.[25] This report apparently satisfied the President and the Maritime Commission.

One of the difficult problems of this period was to obtain a reasonably accurate estimate of the tonnage of cargoes to be moved overseas, as a basis for determining the amount of shipping which the Army Transport Service would need. The procuring services of the War Department were handicapped in supplying such figures, not only by the extreme elasticity of the oversea requirements but also by uncertainty as to the rate at which industry would be able

[20] Memo for record, by Col D. C. Cordiner, 9 Apr 41, sub: Trans of Cargo to Atlantic Bases, OCT HB OQMG Traf Contl Br.

[21] Ltr, SW to Chm Mar Com, 12 Mar 41, G-4/29717-54; DF, ACofS G-4 for TAG and QMG, 28 Jun 41, sub: ATS to South America, G-4/29717-26.

[22] Memo, ACofS G-4 for JAG, 7 Oct 41, sub: Authority for Trans Coml Passengers and Cargo; Memo, JAG for ACofS G-4, 17 Oct 41. Both in G-4/29717-90.

[23] OQMG Cir Ltr 78, 28 Apr 41, sub: Discontinuance of Intercoastal Trans Sv; Memo, ACofS G-4 for CofS USA, 28 Mar 41; 1st Ind, TAG for QMG, 3 Apr 41, sub: NY-SF and SF-NY Trans Sv. Last two in AG 575.1.

[24] Memo, TAG for CG's all Armies, etc., 7 Jun 41, sub: Trans of Dependents and Household Goods, AG 541.1 (5-26-41).

[25] Memo, ACofS G-4 for CofS USA, 9 Jul 41, sub: Utilization of Army Vessels; Memo, DCofS USA for SW, 10 Jul 41; Ltrs, SW to the President, 10 Jul 41 and 12 Jul 41. All in G-4/29717-26.

to deliver the matériel. An estimate prepared early in 1941 in The Quartermaster General's Transportation Division indicated that, as compared with 419,769 measurement tons shipped during the fiscal year 1940, the tonnage for the fiscal year 1941 would be about twice that amount, while for the fiscal year 1942 it was expected to increase to over 2,100,000 measurement tons.[26] In July 1941 the Transportation Branch of G–4 gave the Maritime Commission an estimate of 2,317,000 long tons (equivalent to about 4,600,000 measurement tons) to be moved overseas during the fiscal year 1942, of which about 40 percent could be moved by the Army transports then in service, while the remainder would have to be shipped on commercial vessels.[27] A statement prepared by the Traffic Control Branch of the Transportation Division as of 30 September 1941, based on the best calculations that could be made by the several supply services, placed the Army's total outbound movement of oversea cargo for the fiscal year 1942 at slightly over 6,000,000 measurement tons. Actual Army shipments during that year were slightly under 6,000,000 measurement tons. The above figures do not include shipments by War Department contractors on commercial bills of lading, which in the 30 September 1941 statement were estimated at approximately 2,600,000 measurement tons for the fiscal year 1942.[28]

In reviewing the situation for the Chief of Staff in September 1941, the Assistant Chief of Staff, G–4, expressed no concern over the Army's shipping position. He stated that the "Army's main fleet" (presumably the Army Transport Service) consisted of 31 vessels—16 troop transports and 15 freighters; that in addition to the traffic handled by these Army vessels, a large amount of commercial space had been used, and that the Maritime Commission had met all requests for such space promptly.[29] His statement indicated that the Army Transport Service then had a capacity of 18,000 troops and 177,000 measurement tons of cargo; that the Naval Transportation Service had a capacity of 35,000 troops and 273,000 tons of cargo; that in an all-out effort the Maritime Commission could make available ships with capacity for 96,400 troops and 1,852,000 tons of cargo. It added, with a tinge of optimism which was scarcely warranted, that the shipping situation was improving as the Maritime Commission's construction program produced more bottoms. It gave the following summary to show the growth of the Army's transportation activities at United States ports since the outbreak of hostilities in Europe:

	FY 1939	*FY 1940*	*FY 1941*
Measurement Tons of Cargo—Outbound	250,000	420,000	1,060,000
Passengers Transported	54,300	88,800	125,500

[26] Memo within Trans Div, Liebler for Cordiner, 12 Feb 41, OCT HB OQMG Water Trans Br.

[27] Ltr, C of Trans Br G–4 for Chm Mar Com, 25 Jul 41, OCT HB Gross Day File.

[28] Memo within Trans Div OQMG, Wardlow for Dillon, 30 Sep 41, and accompanying statistical tabulation, OCT HB OQMG Traf Contl Br. Actual shipments for July–November 1941 based on Water Trans Br Data Book II, OCT HB OQMG Water Trans Br; Dec 41–Jun 42 figures from Transportation, Comparative Data, World War I—World War II, Jul 43, OCT HB MPR.

[29] Memo, 10 Sep 41, sub: Status of Water Trans, G–4/29717–86.

The effort to reinforce the Philippines during the fall of 1941 was beset with numerous problems which brought into sharp focus the Army's unreadiness to provide and move overseas large emergency shipments of troops and matériel. This effort involved the equipment of the Philippine Army and the equipment and reinforcement of the United States garrison.[30] A tentative schedule of freight movements, starting 1 November, was submitted to the Commanding General, U.S. Army Forces in the Far East (USAFFE), with an inquiry as to whether Manila would be able to accommodate the shipments. The reply was in the affirmative, but on condition that not more than six ships would be in port at any time.[31] At the end of October, approved Philippine supply requirements amounted to 790,000 measurement tons, of which it was estimated that 720,000 tons could be lifted by 1 March 1942, mostly in space furnished by the Maritime Commission, if the supplies could be made available for the scheduled sailings. Although at that time matériel totaling 500,000 measurement tons had been released or had been recommended for release by the supply services, up to 8 December only 87,045 long tons, or 297,481 measurement tons, actually had been offered for shipment, and the major portion of that tonnage was motor vehicles. In order to expedite the movement of about 20,000 troops to the Philippines, six commercial passenger liners were chartered to supplement the seven Army transports which could be made available for the purpose, and there was delay in arranging waiver of the inspection regulations so that the maximum number of troops could be carried on the chartered ships.[32]

When word of the Japanese attack was received six troopships and nine cargo ships were at sea bound for Manila. None reached its destination. Acting under radio instructions four of the troopships which had sailed recently from San Francisco returned to that port; the remainder headed for other friendly ports, and all but one cargo ship arrived safely.

It was recognized that this urgent movement of troops and supplies to the Philippines would place a heavy strain on the San Francisco Port of Embarkation. To relieve the situation so far as troops were concerned, the 30th Infantry was ordered to vacate the Presidio in order to make that facility available for staging purposes, and the sailings of two Coast Artillery units to Hawaii were deferred.[33] The principal problem, however, was with the transshipment of cargo. A representative of the Transportation Branch, G-4, was sent to San Francisco to observe the operation. He reported that under the circumstances a splendid job was being done, but he also pointed out that to save confusion and loss of time better marking of shipments by the

[30] Memo, ACofS WPD for ACofS G-4, 29 Jul 41, sub: Emerg Mbl Phil Army, and Incls, WPD 3251-52; Memo, ACofS G-4 for TAG, 21 Aug 41, sub: Equip for Phil Dept. Both in G-4/27573-18, Sec. I.

[31] Memo, ACofS G-4 for TAG, 22 Oct 41, sub: Schedule of Shipments to Phil; Rad 674, USAFFE to TAG, 25 Oct 41, AG 575.1 (10-25-41)MC; Memo, ACofS G-4 for ACofS WPD, 30 Oct 41; Memo, QMG for CofEngrs, 23 Oct 41, sub: Shipments to Phil Dept; Memo, ACofS WPD for ACofS G-4, 1 Nov 41, WPD 4560-1; Summary by Traf Contl Br Trans Div OQMG, 9 Dec 41. All in G-4/27573-18, Sec II.

[32] Memo, ACofS G-4 for CofS USA, 13 Nov 41, sub: Phil Movement; G-4/27573-18, Sec II; Memo, ACofS G-4 for CofS USA, 28 Nov 41, sub: Waiver of Safety Requirements, G-4/29717-96; Memo, ACofS G-4 for CofS USA, 9 Dec 41, G-4/29717-96; *Biennial Rpt, CofS USA, 1943,* pp. 4, 5.

[33] Ltr, G-4 (Ross) to CG SFPE, 13 Nov 41, G-4/27573-18, Sec II.

supply services and prompter forwarding of the shipping papers to the port were desirable.[34]

A representative of The Inspector General also observed the operation from 29 November to 7 December. He found that the port's task of loading ships with several troop units and their organic supplies and equipment, some of which came from home stations and some from other stations and depots, was complicated by four difficulties: (1) inability to determine whether shortages of equipment were the result of limited supply or other causes, (2) insufficient space at the port for segregating and verifying the equipment of the several units, (3) insufficient personnel in the advance detachments sent to the port by the units, and (4) lack of experienced commissioned personnel on the staff of the port commander.[35]

Preparations for Amphibious Operations

The Army's difficulties in obtaining sufficient shipping to service its oversea bases properly were intensified by the necessity of providing vessels for use in joint Army-Navy exercises and in preparing for joint operations against enemy opposition. The arrangements for such exercises and operations brought to light many points of physical unpreparedness, a lack of understanding between the Army and the Navy regarding responsibility for the provision of transports and landing boats, and the absence of adequate doctrine and procedures.

For the joint exercises which were held on the Pacific coast in January 1940, the San Francisco Port of Embarkation was responsible for assembling the Army transports which were to be used, installing special equipment on them, loading ship stores and supplies for the troops, and handling the embarkation of troops at two ports on Puget Sound. In his report covering the operation, the port commander stated that the War Department had sent him no instructions until he had asked for them, and that the Fourth Army, from which the troop units had been drawn, had provided no basic loading plan by which he could be guided.[36] Among the conditions requiring correction, as listed by the War Plans Division after an analysis of all reports submitted after these exercises, were the transport masters' unfamiliarity with convoy procedure, lack of up-to-date drawings of the transports, lack of proper facilities on the transports for radio and visual signaling, unsuitability of the transports for "combat loading," insufficiency and unsuitability of the boats available for landing operations, and lack of adequate training in loading and unloading personnel and equipment.[37]

The reports on these joint exercises and subsequent discussion brought out other points of unpreparedness. There was a difference of opinion as to who should control the combat loading of transports, the port commander or the commander of the landing force. The pertinent regulation gave the commander of troops the final decision, and The Quartermaster General considered this the proper arrangement since the prob-

[34] Personal Ltr, Lt Col F. S. Ross to Col C. P. Gross, 3 Dec 41, G-4/27573-18, Sec II.

[35] Memo, Lt Col John W. Mott for TIG, 13 Dec 41, G-4/27573-18, Sec II.

[36] Rpt to CG Fourth Army, 27 Jan 40, G-4/30557-11; Rpts of other observers at these exercises are in AG 354.21 (9-29-39), Sec 3.

[37] Memo, WPD for CofS USA, 11 Jun 40, sub: Joint Army-Navy Exercises (WPD 4232-4), AG 354.21 (9-29-39), Sec 3. Combat loading involved stowing organizational equipment and supplies in the ships so that they might be unloaded quickly and in the order needed.

lem was essentially a tactical one.[38] The suggestion was offered that a stevedore battalion should be activated to facilitate operations at ports of embarkation and debarkation when such exercises were being conducted, but G–3 considered this impracticable since it would necessitate the inactivation of other units and the matter was not pursued further.[39] The Army ascertained that the Navy was placing only limited orders for new landing boats, and consequently ordered such equipment for use with its own transports. The Army also installed heavier booms on those transports which were earmarked for service in joint exercises.[40]

The discussions between the Army and Navy regarding a further program of joint exercises disclosed disagreement on many points, including the extent of such exercises and the sources of the marine equipment to be used. The Army desired to have one division on the Atlantic coast and one on the Pacific coast thoroughly trained in amphibious operations and regretted the Navy's inability to accept this plan because of other commitments.[41]

The exercises held off Culebra Island, Puerto Rico, 27 January–13 February 1941, again showed that the Army transports which were used were deficient in equipment and that the arrangements for landing troops and impedimenta were inadequate.[42] A proposal which grew out of these exercises, that amphibious vehicles be used in effecting assault landings, elicited from G–4 the comment that such vehicles were not yet available but that study was under way for the development of this type of equipment. Regarding the need for modifications in existing transports to facilitate assault landings, and the advisability of obtaining new vessels especially designed for that purpose, G–4 favored recommending to the Joint Board a revision of paragraph 18 of "Joint Action of the Army and the Navy," to make the Navy alone responsible for providing suitable transport for joint exercises, since it had that responsibility in operations where real opposition was anticipated. There had been no agreement on the latter point up to the time of our entry into the war.

The fact that the Navy was responsible for providing transports for joint operations against enemy resistance did not mean that the Army Transport Service was unaffected by the preparations for such operations. Early in 1941, in order to avoid the necessity for improvising emergency expeditionary forces after the demand had arisen, certain units were selected for organization into three task forces and planning was begun to place them in a state of readiness for oversea service.[43] The Navy, after estimat-

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[38] Memo, ACofS G–4 for TAG, 21 Jun 40, sub: Rpt on Army Participation, etc., G–4/30557–11; 1st Ind, QMG for TAG, 23 Jul 40. Both in AG 354.21 (9–29–39), Sec 3. AR 30–1190, par. 3b, 23 Jul 32.

[39] Memo, ACofS G–3 for ACofS G–4 and WPD, 6 Apr 40, G–4/30557–11.

[40] Memo, ACofS WPD for ACofS G–4, 29 Jun 40; Memo, OQMG (Kells) for G–4 (Ross), 26 Sep 40. Both in G–4/29367–81.

[41] Memo, ACofS WPD for CofS USA, 27 Feb 40, WPD 4116.1; Informal Memo for Gen Marshall, initialed OW, 19 Mar 40, with notes for discussion with Admiral Stark; Memo, CofS USA for CNO, 15 May 40, sub: Army-Navy Exercises, FY 1941; Memo, ACofS WPD for ACofS G–3, 11 Jun 40, sub: Army-Navy Minor Joint Exercises, FY 1942, WPD 4232.3. All in AG 354.21 (12–7–39), Sec 1.

[42] See rpt of observer, Lt Col D. S. Rumbough to TAG, 21 Feb 41, sub: Army-Navy Joint Exercises (Fleet Landing Exercise 7); Memos, ACofS G–4 for ACofS G–3, 7 Apr 41 and 22 Jul 41. All in G–4/30557–11.

[43] Memo, TAG for CG First Army, 10 Feb 41, sub: Org of Emerg Exped Forces, AG 381 (11–12–40) Sec 2.

ing with Army assistance the shipping required for moving these forces, found that it would not be able to obtain all of the needed vessels from the Maritime Commission and proposed that it take over three of the Army's troopships. The final result of this proposal was that in late May the Army was directed by the President to arrange for the transfer of six of its troop carriers to the Navy, including the largest of its fleet, the *Manhattan* and the *Washington*.[44] In substitution for these ships, the President directed the chairman of the Maritime Commission to turn over to the Army seven smaller passenger vessels.[45] In the same letter he directed the Maritime Commission to turn over to the Navy five passenger ships and fourteen cargo ships. Among the passenger ships thus placed under Navy control was the *America,* the largest vessel under the American flag.

Three of the ships transferred from the Army to the Navy were converted into combat loaders. In July 1941 the Navy proposed that it also be permitted to convert ten of the Army's remaining transports to combat loaders according to Navy standards, so that they would be ready if and when needed.[46] The Quartermaster General pointed out that this would impair the vessels' effectiveness on the regular routes where they were sorely needed, and G–4 registered a strong protest on the ground that the proposal involved taking the Army's best passenger ships out of service for a period and reducing their capacities by conversion in order to provide against the "improbable contingency" that they might be required for special operations.[47] The Chief of Staff nevertheless approved a recommendation of the Joint Planning Committee that the ten Army transports be converted, with the understanding that the conversion schedule would be so arranged that Navy transports would be available to the Army during the conversion period, if required.

In support of its July proposal to convert ten additional Army transports the Navy had stated that, from its own fleet and such vessels as could be obtained from the Maritime Commission, it had been able to provide only seventeen combat loaders, whereas twenty-seven were needed in order to handle two divisions and have three vessels in reserve. In October the Navy raised its requirements to thirty-six vessels, and the Joint Board directed the Joint Planning Committee to make a study of the situation.[48] Our entry into the war and the emergency actions which followed that event removed the necessity for this study.

While losing its struggle to prevent a large number of Army troopships from being converted to combat loaders (in which status they were likely to be withdrawn from troop service at any time for combat operations), G–4 was overruled also in its opposition to a Navy proposal that the large Navy troopships *West Point* (ex-*America*), *Wakefield* (ex-*Manhattan*), and *Mount Vernon* (ex-

[44] Memos, SW for SN, 26 May 41 and 29 May 41, G–4/29717–71; see also Memo, CofS USA for CNO, 25 May 41, WPD 2789.

[45] Ltr, 26 May 41, G–4/29717–26.

[46] Memo, BuShips USN for WD Liaison Officer (Crane), 26 Jul 41, G–4/29717–51; Memo, ACNO for JB, 5 Aug 41, JB 320 (Ser 715). Among the ten were two vessels which were still being constructed by the Maritime Commission for the Army.

[47] 2d Ind, QMG for ACofS G–4, 7 Aug 41, G–4/29717–51; Memo, ACofS G–4 for ACofS WPD, 30 Aug 41, sub: Conv Army Transports for Combat Loading, G–4/29717–81; Memo, JPC for JB, 17 Sep 41, JB 320 (Ser 715); Memo, ACofS WPD for ACofS G–4, 18 Sep 41, G–4/29717–81.

[48] JB Mtg, 22 Oct 41; Memo for JPC, 24 Oct 41, JB 320 (Ser 733); JB Mtg, 9 Feb 42 (Ser 733).

Washington), be converted into airplane carriers, for in September 1941 the Secretary of War approved a Joint Board report which favored such action.[49] The conversion work on these vessels did not get under way promptly, however, and was destined not to be accomplished. After our entry into the war the Army requested that those vessels continue as regular troopships, in view of the extreme need for greater troop capacity, and especially the need for fast transports. Plans then were adopted for providing airplane carriers, as well as additional combat loaders, by converting vessels of other types.[50]

The position of the War Plans Division of the General Staff in regard to these matters is of interest. Whereas G–4 and The Quartermaster General were concerned primarily with maintaining an Army Transport Service adequate to handle the growing traffic to the oversea bases, and the Navy was concerned primarily with the development of an adequate fleet of combat loaders for the use of expeditionary forces, WPD was concerned with both aspects of the situation. G–4 observed that WPD "apparently favored" the Navy's plan for converting ten Army transports and presented its arguments against the proposal, but without success.[51] The Deputy Chief of Staff took cognizance of this difference between the two staff divisions and supported the G–4 position, expressing the view that the Navy should obtain from the Maritime Commission rather than from the Army the vessels necessary to the performance of "one of the normal Naval tasks" under the agreement, "Joint Action of the Army and the Navy." [52] The War Plans Division also had recommended withdrawal of the Army's objection to the conversion of the *West Point*, *Mount Vernon*, and *Wakefield* to airplane carriers.[53] Its reasoning appears to have been that the Army could obtain other vessels for its troop service. That was not a ready solution, however, since it was the difficulty of obtaining additional vessels that made the problem an acute one for both the Army and the Navy.

In August 1941 a joint exercise was conducted in the New River area of North Carolina with a view to preparing the Atlantic Amphibious Force for action on short notice. Looking backward at that undertaking and forward to other planned exercises, the Commander in Chief, U.S. Atlantic Fleet, vigorously asserted that he considered the force in no condition for actual operations. He stated that no effective organization had been set up, that all units lacked adequate equipment, and that the available transports had neither sufficient capacity nor suitable facilities.[54] Referring to this communication insofar as it pertained to the Army elements of the force, the War Plans Division asserted that those elements had complete equipment as authorized in tables of basic allowances, and expressed the view that any special equipment required for landing operations

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[49] Memo, ACofS G–4 for DCofS USA, 24 Sep 41; Memo, JPC for JB, 8 Oct 41, JB 320 (Ser 723); Ltr, Secy WDGS to Secy JB, 24 Oct 41. All in G–4/29717–26.

[50] Memos, CofS USA to CNO, 22 and 30 Dec 41, G–4/29717–81.

[51] Memo, ACofS G–4 for ACofS WPD, 30 Aug 41, G–4/29717–81; Memo, ACofS WPD for ACofS G–4, 18 Sep 41. Both in WPD 2789.

[52] Memo, DCofS for CofS USA, 2 Dec 41, sub: Conv of Army Transports for Combat Unit Loading, WPD 2789.

[53] Memo, ACofS WPD for ACofS G–4, 2 Oct 41, WPD 2789; see also Memo, ACofS WPD for ACofS G–4, 5 Oct 41, WPD 4131.

[54] Memo for CNO, 2 Oct 41, sub: Atlantic Amphibious Force—State of Readiness, WPD 4232 46–75; see also unsigned statement on New River exercises, G–4/33088.

should be prescribed by the task force commander—in other words, by the Navy.[55] Late in November WPD observed that "due to the unavailability of shipping the past several months, only one division has been partially trained [for landing operations] in the entire Army," and suggested that GHQ collaborate with the Navy in preparing "a detailed plan" for the training of a number of divisions.

The correspondence and reports concerning joint exercises during 1940–41 and the negotiations in regard to vessels required for planned expeditionary forces indicate how inadequate were the preparations for carrying on amphibious operations up to the time of our entry into the war, and emphasize the magnitude of the task which lay ahead of the armed services in preparing themselves for the successful execution of the many joint actions that would be required both in Europe and in the Pacific.

The Submarine Threat

Less than a year after Hitler came to power, Germany opened a submarine college at Kiel and began training crews under the tutelage of officers experienced in U-boat warfare. German technicians also began designing larger and more powerful undersea craft. The U-boat had come close to imposing a fatal stranglehold on the Allied effort in World War I, and the renascent German military machine recognized its importance in the forthcoming struggle for world power. Great Britain still was dependent on shipping for a large portion of her food and raw materials, as well as for the deployment and supply of her forces. The Soviet Union still was underdeveloped industrially, and her potential military strength could be realized only with the aid of tools and equipment supplied by oversea allies. The United States, if she again should be drawn into the conflict, would have to rely on ocean transport to make her might felt in Europe. The submarine therefore was Germany's front-line weapon against her greatest potential foes. In September 1939 she had 60 such vessels in commission, 30 of which were of 500 tons or larger and capable of operation in the Atlantic.[56]

During the 28 months from September 1939 through December 1941 about 15,000,000 deadweight tons of merchant shipping were lost by Allied and neutral nations from all causes, of which an estimated 14,000,000 deadweight tons were ocean-going.[57] The losses of ocean-going shipping were more than two and one-half times the construction during the same period by the United States and the British Empire, which were virtually the only sources of new shipping for the Allies.[58]

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[55] Memo, ACofS WPD for CofS USA, 3 Oct 41, WPD 4232 46–75; Memo, ACofS WPD for CofS of Field Forces GHQ, 28 Nov 41, WPD 2789. As late as April 1942 the Army registered with JCS concern over lack of progress in amphibious training. See JCS 10th Mtg, 13 Apr 42, An. IV.

[56] Winston S. Churchill, *The Gathering Storm* (Cambridge, 1948), pp. 423–24. Germany expected to have 99 U-boats in service by early 1940.

[57] Based on British Admiralty Rpt, BR 1337, *British and Foreign Merchant Vessels Lost or Damaged by Enemy Action During Second World War*, 1 October 1945, statistical summaries 1 and 10. This report gives only gross tonnages, but it is used extensively in discussing ship losses because of its comprehensiveness, and gross tons are converted to deadweight tons at the generally accepted ratio of 1 to 1.5. Deadweight tonnages for ship losses, although they must be regarded as rough estimates when based on this report, are given to permit of ready comparison with deadweight tonnages for ship construction which are presented in the next section.

[58] BR 1337, summary 14, shows 3,535,000 GT of vessels 1,600 GT or over constructed, which at a ratio of 1 to 1.5 equals about 5,300,000 DWT.

After the entry of the United States into the war the sinkings increased and during the year 1942 the losses of ocean-going vessels totaled slightly more than 12,000,000 deadweight tons, or an average of 1,000,000 tons per month. The 1942 losses exceeded additions by new construction by almost 1,500,000 deadweight tons, and amounted to more than one-fourth of the total shipping available to the Allies at the beginning of that year. About 75 percent of all merchant shipping losses during 1942 were due to submarine activity.[59]

To the Allies, confronted as they were with the necessity not merely of holding their own but of striking heavier and heavier blows against the enemy, these shipping losses had serious implications. A few illustrations will suffice. A British study presented to the Combined Chiefs of Staff in February 1942 indicated that British imports, excluding oil, had amounted to 52,000,000 tons in 1938, had been only 30,500,000 tons in 1941, and were expected to total only 5,250,000 tons during the first quarter of 1942.[60] The heavy losses sustained by convoys carrying lend-lease supplies to northern ports of the Soviet Union, because of advantages enjoyed by German submarines, surface raiders, and aircraft based on Norway, was a potent factor in the decision to divert a large part of that traffic to the longer route around the Cape of Good Hope to the Persian Gulf and to develop a huge Anglo-American supply operation in Iran, embracing ports, railways, and truck services.[61] Because of sinkings in May and early June 1942, the War Shipping Administration found it necessary to delete 17 vessels from a list of 74 which it had nominated for June and July departures in the BOLERO movement.[62] The large number of vessels sunk in the Gulf of Mexico and the Caribbean forced the Army for a period to route the bulk of its supplies for the Panama Canal via Los Angeles, rather than New Orleans, thus increasing both rail and water hauls.[63]

During 1942, although the output of American shipyards was increasing rapidly and was expected to continue to increase, there was no way of knowing what new submarine onslaughts Allied shipping might have to withstand, and British and American officials showed no disposition to sound an optimistic note on the shipping issue. Actually, that year proved to be the most disastrous from the standpoint of ship losses. The cumulative deficit in the inventory of Allied and neutral merchant shipping of all types, compared with September 1939, was greatest during the summer months of 1942, when it amounted to almost 10,000,000 gross tons, or an esti-

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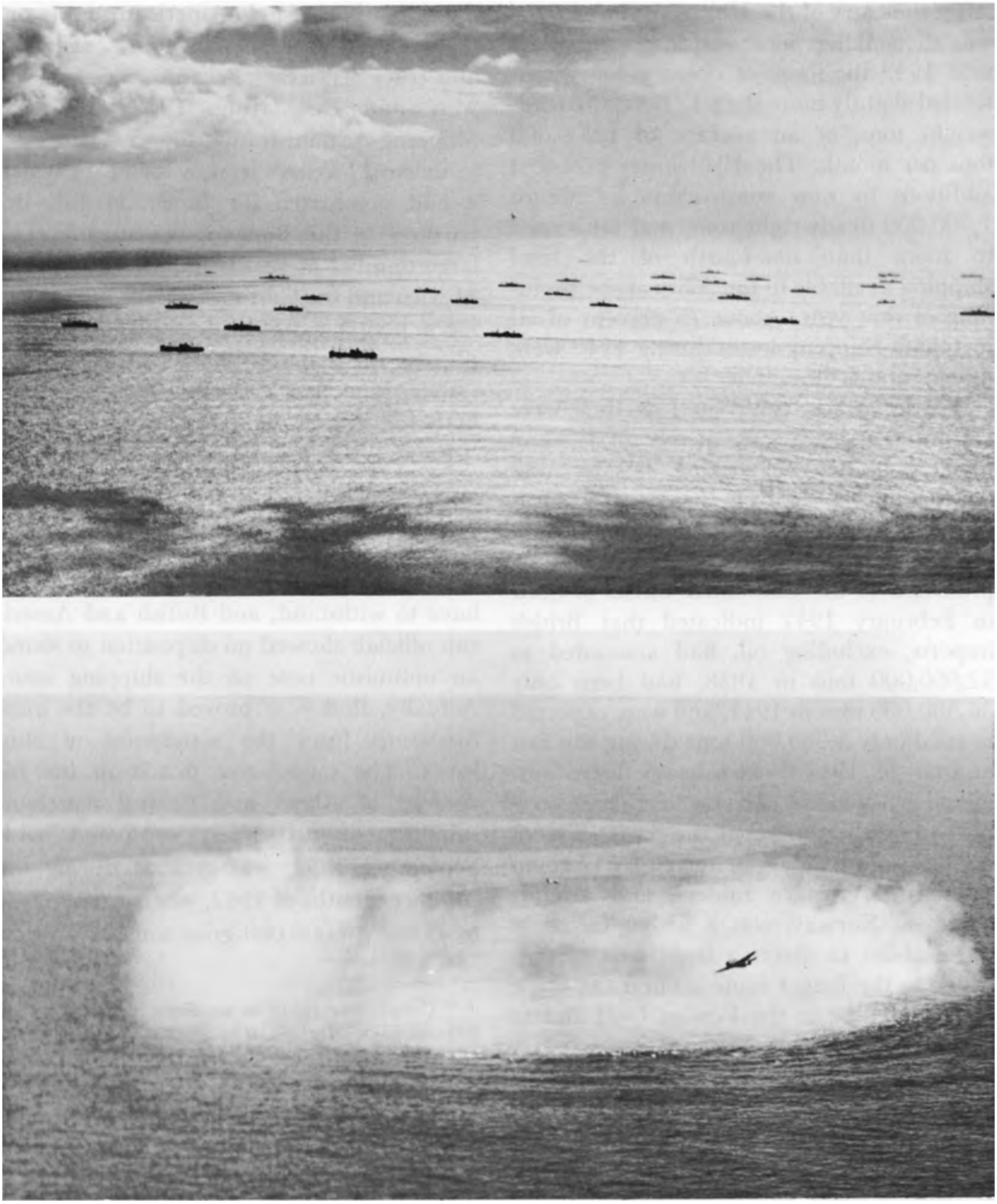
[59] Losses for 1942, stated in DWT, are from Table I, Standard Statement of Gains and Losses, issued by Combined Shipping Adjustment Board, 17 Sep 45, covering vessels of 1,600 GT and over; CCS 203, 24 Apr 43, p. 8, gives shipping available to Allies on 1 Jan 42 as 44,390,000 DWT. For causes of losses see U.S. Fleet Anti-Submarine Bulletin, Mar 45, p. 17, and BR 1337, summary 4.

[60] CCS 39, 14 Feb 42; see William K. Hancock and M. M. Gowing, *British War Economy* (London, 1949), p. 357.

[61] Concerning route to northern Soviet ports see Samuel Eliot Morison, *The Battle of the Atlantic*, Ch. VII. Concerning Persian Gulf operations see T. H. Vail Motter, *The Persian Corridor and Aid to Russia*, UNITED STATES ARMY IN WORLD WAR II (Washington, 1951), Chs. X, XVI, XVII, XVIII. For number of sailings on respective routes see Office of Foreign Liquidation, Dept State, Report on War Aid Furnished by the United States to the U.S.S.R., 28 Nov 45, p. 14.

[62] CMTC 23d Mtg, 18 Jun 42, Item 4.

[63] Memo, CofT for CG's NOPE and SFPE, 28 Jun 42, sub: Los Angeles as Temporary Supply Port for Panama, AG 563.5 Panama.



CONVOY FORMING OFF A U.S. ATLANTIC PORT *(top). Navy aircraft attacking a submarine (bottom). Antisubmarine measures were increasingly effective as the war progressed.*

mated 15,000,000 deadweight tons.[64] Thereafter, ship construction exceeded losses and the deficit steadily diminished. It was entirely wiped out in October 1943.

Addressing the Congress of the United States in May 1943, Prime Minister Churchill said: "While I rate the U-boat danger still the greatest we have to face, I have a good and sober confidence that it will not only be met and contained but overcome."[65] The Commander in Chief, U.S. Fleet, Admiral Ernest J. King, reported: "By the spring of 1943, the war against German submarines in the Atlantic had turned in our favor and we were fully on the offensive in that area."[66] The justification for this optimism was soon apparent. The losses of Allied and neutral ocean-going shipping from all causes totaled about 5,300,000 deadweight tons in 1943, or less than half the losses of 1942, and only about 2,100,000 deadweight tons were lost in 1944.[67]

During the entire war period, that is from September 1939 through August 1945, the losses of Allied and neutral merchant shipping of all types totaled about 36,000,000 deadweight tons (of which about 34,000,000 deadweight tons were ocean-going types). Of the total losses, British vessels accounted for almost 19,000,000 tons, United States vessels for about 6,000,000 tons, and the vessels of other Allied and neutral nations for more than 11,000,000 tons. Almost 32,000,000 deadweight tons were lost because of enemy action, including almost 22,000,000 deadweight tons lost as the result of submarine action; the remaining losses were due to the usual hazards of the sea. Of the vessels lost on account of enemy action, about 18,100,000 tons were lost in the North Atlantic, 2,000,000 tons in the South Atlantic, 2,500,000 tons in the Mediterranean, about 2,200,000 tons in the Indian Ocean, 5,200,000 tons in United Kingdom coastal waters, the North Sea, and the Baltic, and 1,700,000 tons in the Pacific.[68]

While in discussing the extent of the losses at sea the tonnage of ships sunk is a convenient means of measurement, it is not to be forgotten that most sinkings involved also loss of life or loss of cargo, or both. The men and women who perished in marine disasters (merchant seamen, service personnel, and civilian passengers) were irreplaceable. Replacement of the cargoes, like replacement of the ships, required time, labor, and scarce materials, all of which were in short supply during the period of intensive war effort. The significance of each sinking, therefore, reached far beyond the loss of the services of a transportation facility, damaging as that may have been.

Despite the perilous experience of 1914–18, when the losses of Allied and neutral shipping had approached 19,000,000 deadweight tons, the opening of World War II found the Allies unprepared to meet the submarine offensive which the

[64] See chart, ASF MPR, Sec. 3, Dec 43, p. 15. Cumulative deficit shows how far construction fell short of replacing losses.

[65] "Text of Churchill's Address before Congress," *The Washington Post*, May 20, 1943; cf. Winston S. Churchill, *Their Finest Hour* (Cambridge, 1949), p. 598.

[66] Admiral Ernest J. King, Rpt to SN, up to 1 Mar 44, *Our Navy at War*, U.S. News edition, p. 24.

[67] Table I, Standard Statement of Gains and Losses, 17 Sep 45, covering merchant vessels of 1,600 GT or more. BR 1337, summary 10, indicates that including smaller vessels losses were about 5,600,000 DWT in 1943 and 2,260,000 DWT in 1944.

[68] Based on BR 1337, summaries 1, 4, 8, 10

Germans had in store for them.[69] Particularly after the United States and Japan had joined the hostilities, placing Pacific as well as Atlantic sea lanes in jeopardy, the number of escort vessels was wholly inadequate and aircraft carriers were not available to accompany the many convoys which put to sea. Land-based air coverage also was extremely thin, so that for a period enemy U-boats reaped an easy harvest of vessels moving in our Atlantic and Gulf coastal waters.[70] There was no effective organization to co-ordinate and control the utilization of existing means and methods among the Allies.[71]

Time was required for rectifying our lack of readiness to meet the U-boat challenge, and the provision of needed escort vessels of various types, escort aircraft carriers, and other antisubmarine equipment made heavy demands on construction facilities and materials. Measures were devised, however, according to the principle laid down by the Combined Chiefs of Staff, "that the defeat of the U-boat must remain the first charge on the resources of the United Nations." [72] The success which the Allies ultimately achieved in offsetting the submarine menace is attested not only by the reduction in losses of merchant vessels, as indicated above, but by the increased destruction of German U-boats. Whereas only 35 German submarines were destroyed in 1941 and 85 in 1942, the casualties were 237 in 1943 and 241 in 1944.[73] Throughout the war a total of 781 German, 130 Japanese, and 81 Italian submarines were destroyed. Of the German losses about 725 were vessels of 500 tons or over, hence capable of operation in the open ocean areas.[74]

The foregoing data on the areas in which Allied merchant vessels were lost and the nationality of the enemy submarines destroyed indicate how preponderantly the U-boat hazard which confronted the Allies was of German origin.

While the Germans lost about 725 submarines of the ocean-going type during the war, they built about 1,040 and on V-E Day had about 350 in being, though not necessarily in operational status. The U-boat threat to the Allies' transatlantic lines of communication, therefore, never could be disregarded. This is evidenced by the fact that in February 1945, with the end of the heavy troop movement to Europe in sight, the British Admiralty thought it best that the large British passenger liners should be kept out of United Kingdom

[69] Salter, *Allied Shipping Control*, pp. 355–59, gives the war losses of Allied and neutral nations during 1914–18 as 12,591,000 GT, or roughly 18,886,000 DWT.

[70] See remarks of Admiral H. R. Stark, CNO USN, ARCADIA Proceedings, 24 Dec 41, Items 5 and 14; Admiral King's report cited n. 66, p. 49. Concerning U.S. unpreparedness for antisubmarine action by air and differences between Navy and AAF as to jurisdiction and strategy see *The Army Air Forces in World War II* (Chicago, 1948, 1949) Vol. I, Ch.15, Vol. II, Ch. 12. Concerning Civil Air Patrol, see Morison, *Battle of the Atlantic*, pp. 276–81.

[71] Rpt of Combined Stf Planners, sub: Measures for Combating the Submarine Menace, issued with CCS 203, 24 Apr 43, reviewed the Allied shortcomings, which by then had been partially overcome, and made recommendations for further action.

[72] Admiral Ernest J. King, USN, in opening address at Atlantic Convoy Conference, Washington, 1 Mar 43, p. 2 of minutes, OCT HB Topic Convoy and Routing.

[73] Admiral King's final rpt to SN, *U.S. Navy at War*, 1 Mar 45–1 Oct 45, U.S. News edition, p. 29.

[74] Rpt, OCNO USN (OPNAV–P33–100 New 5–46), German, Japanese, and Italian Submarine Losses, World War II, May 46; Rpt 51, Operations Evaluation Group, OCNO USN, Apr 46, Pt. I, p. 144.

waters as much as possible because of the submarine danger.[75] The U.S. Navy reported that the month of April 1945 had witnessed the commencement in the Atlantic of the "long awaited German U-boat offensive," which extended westward to the U.S. Atlantic seaboard.

A postwar statement by Grossadmiral Karl Doenitz made it clear that the Allied anticipation of a renewed U-boat offensive had good foundation. The reversal suffered by German submarines in 1943 was due principally to improved Allied air coverage and radar detection, which were especially effective against the types of submarines which Germany then had in service—types of slow speed and limited underwater capability. By 1945, in addition to the Schnorckel which made more extensive underwater operation possible, the Germans were producing new types of U-boats with higher speed, longer range, and other technical improvements, with which they expected to again heavily harass Allied shipping. But they were not ready to launch this new campaign, Doenitz stated, when Germany was forced to capitulate.[76]

The Shipbuilding Achievement

The curbing of the submarine was only one factor in overcoming the limitation which shipping placed upon our oversea military effort. The other essential factor was the construction of enough new ships to offset the losses incurred and to provide sufficient added capacity to make possible the heavy offensive operations which were necessary to accomplish the defeat of Germany and Japan. The shipbuilding achievement by which this goal was attained stands out as one of the more spectacular production feats of the war. It was largely an American achievement, for reasons which will be explained. During the five-year period 1941–45, American shipyards delivered vessels aggregating 55,312,000 deadweight tons against Maritime Commission orders, of which well over 54,000,000 deadweight tons were suitable for ocean-going service on the deepwater or coastal routes. This output was roughly three times the 18,500,000 deadweight ton program which was set up by the United States Shipping Board in World War I. It was approaching four times the 15,000,000 tons actually completed during the five-year period 1917–21. It was substantially greater than the 48,000,000 tons launched by all nations of the world during the seventeen years, 1922–38.[77]

December 1941 fortunately found the United States relatively well prepared to undertake a large program of ship construction. The major portion of the merchant fleet built under the World War I program had been lost or scrapped and most of the shipyards had been dismantled, but the constructive provisions of the Merchant Marine Act of 1936 had established the basis for a resurgence in the maritime

[75] Msg 69637 Q(M)8, War Office to British Army Staff Washington, 18 Feb 45, OCT HB Mvmts Div British Files; U.S. Fleet Anti-Submarine Bulletin, May 45, p. 9.

[76] Doenitz, Conduct of the War At Sea, printed by Div of Nav Int, USN, 15 Jan 46, pp. 18, 31.

[77] World War II figures based on Rpt, United States Maritime Commission Official Construction Record—Vessels Delivered 1939 Through 1945 (No. 106), which includes a small amount of auxiliary tonnage built for Navy. Edward N. Hurley, *The Bridge to France* (Philadelphia, 1927), p. 47; American Bureau of Shipping, *The Bulletin* (October 1941), p. 27; George S. Armstrong & Company, *The Shipbuilding Industry and the Logistics of Amphibious Warfare* (New York, 1943), p. 48, OCT HB Topic Mar Com Shipbuilding.

industry.[78] That law had enunciated a national maritime policy and created a Maritime Commission to carry the policy into effect. The Commission promptly prepared standard designs for several types of merchant vessels and established a sound replacement program to substitute fast modern ships for old and outmoded ones. The long-range peacetime program which it initiated in 1937 contemplated the construction of fifty ships each year over a period of ten years. With war in Europe threatening, that program was augmented in August 1939 and increased again in August 1940. The year 1941 witnessed further heavy increases which brought the entire program up to approximately 1,200 ships aggregating 13,000,000 deadweight tons.[79]

The Merchant Marine Act of 1936 set forth the policy that the United States should have a merchant marine not only sufficient for commercial purposes but "capable of serving as a naval and military auxiliary in time of war or national emergency." The Maritime Commission, being specifically charged with making that policy effective, was the logical agency to administer the government's wartime program of merchant ship construction. During the early part of the emergency the Army and the Navy informed the Maritime Commission directly of their requirements for regular troop and cargo vessels, as well as for specialized types of merchant ships. Later such requirements were considered and agreed on by the Joint Chiefs of Staff. The Army, cognizant of its dependence on merchant shipping for the performance of its mission overseas, kept its requirements constantly under review and never relaxed its pressure for a construction program adequate to meet its needs.

The cost of the entire program was covered by appropriations to the Maritime Commission. During peacetime the War Department had paid the Commission for used vessels obtained for the Army Transport Service and its budget had included funds with which to reimburse the Maritime Commission for new vessels ordered for Army account. In considering a supplemental estimate for the fiscal year 1942 the Bureau of the Budget threw out an Army request for funds to pay for fourteen vessels and informed the War Department that the Maritime Commission would procure, build, or charter any vessels required by the Army from funds available to it.[80] The arrangement was in line with the President's policy, referred to earlier in this chapter, that merchant shipping should be held in a national pool insofar as practical, with only a limited number of vessels assigned to the Army and the Navy for their exclusive use. It superseded the clause in Joint Army and Navy Basic War Plan—RAINBOW 5, which provided: ". . . all shipbuilding plants will be allocated to the Navy, and the Navy will furnish the Army with such overseas transportation as the Army may require, consistent with national strategic needs as a whole." [81]

Although the United Kingdom had been the principal shipbuilding nation of the

[78] PL 835, 74th Cong., approved June 29, 1936.

[79] *Mar Com Rpt* for the period ending 25 Oct 40, pp. 6–7; for the period ending 25 Oct 41, pp. 2–3, 10–11, App. C.

[80] Memo, ACofS G–4 for CofS USA, 8 Feb 42; Ltr, CofS USA to Chm Mar Com, 12 Feb 42. Both in G–4/33006–4.

[81] See JB 325 (Ser 642–5), Rev. 1, Sec. IX, par. 58c, 19 Nov 41. Arrangement did not apply to vessels under 1,000 gross tons which were procured by Army, Navy, and Maritime Commission; nor to auxiliary naval vessels which were procured by Navy and Maritime Commission.

world during peacetime, her wartime contribution of new merchant vessels was by agreement relatively small. During the visit of the British Prime Minister to the United States immediately after Pearl Harbor, the President and he agreed that "mutual advantages were to be gained by concentrating, insofar as it was practical, our energies in doing those things which each of us was best qualified to do." [82] In line with that principle it was decided that since the United States had the natural resources and the industrial techniques for large-scale production, the new merchant shipping required by the Allies would be built predominantly here, while the British would devote their resources and facilities principally to the construction of combatant vessels. Accordingly, the United Kingdom constructed only about 7,000,000 deadweight tons of ocean-going merchant ships during the five-year period, 1941–45, compared with more than 54,000,000 deadweight tons built in the United States.[83] During this period the British dominions and colonies completed approximately 4,000,000 deadweight tons, so that the entire output of ocean-going merchant shipping by the British Commonwealth of Nations was approximately one-fifth that of the United States. This heavy assignment in the field of merchant ships construction did not relieve the United States of the necessity of producing an unprecedented volume of naval tonnage.

Action to greatly expand the merchant shipbuilding program of the United States was taken early in 1942. In February the President requested the chairman of the Maritime Commission to prepare plans to complete 9,000,000 deadweight tons during that year and 15,000,000 deadweight tons during 1943.[84] The objective for 1942 subsequently was reduced to 8,000,000 deadweight tons, because of increased requirements for nonmerchant type ships, and actual completions totaled 8,044,527 deadweight tons.[85] In view of the heavy ship losses in 1942 and the prospective military requirements, the shipyard capacity was increased to 20,000,000 deadweight tons annually, and the actual output for 1943 was 19,209,991 deadweight tons, which was the peak annual performance. In 1944, with the submarine crisis fading and plans under way for large-scale amphibious operations in the Pacific, the emphasis shifted from the mass production of slower vessels to the construction of faster troop and cargo carriers, assault vessels, and other military types, with the result that the completions for that year totaled only 16, 299,985 deadweight tons. The Commission's schedule for 1945 was about 13,000,000 deadweight tons. Although cutbacks were ordered in the early spring when the German resistance was seen to be crumbling, and others followed the Japanese surrender, the cancellations were not extensive and the 1945 output was 10,598,154 deadweight tons.[86]

The Maritime Commission ship con-

[82] Ltr, President to Prime Minister, read in House of Commons, 3 Aug 43, published in *The Washington Post*, August 4, 1943.

[83] WSA Shipping Summary, Sep 45, pp. 10, 150. Completions during the last four months of 1945 are estimated.

[84] Memo, FDR for Admiral Land, 21 Feb 42, copy in OCT HB Topic Mar Com Shipbuilding; Memo, ACofS G–4 for ACofS WPD, 24 Feb 42, WPD 2789–33.

[85] Memo, Wylie for Gross, 8 Mar 42, sub: Conf between Army and Mar Com, Trans Br G–4/560 Mar Com; United States Maritime Commission Official Construction Record—Vessels Delivered 1939 through 1945 (No. 106).

[86] *Mar Com Rpt* for period ending 30 Jun 45, pp. 4, 5; "Byrnes is Firm on Cutbacks," *Journal of Commerce* (New York), April 2, 1945.

struction program during the period 1941 through 1945 included a number of basic types and some special types. Most basic types were subject to modification to meet special war needs. Some modifications were made during construction, while others were made following delivery. It is difficult, therefore, to present a wholly satisfactory summary by types. The following tabulation classifies the vessels completed during the period 1941–45 according to their basic types, except that "military types" include some other types which were converted prior to delivery: [87]

Type of Ship	*No. of Ships*	*Deadweight Tons*
Total	5,570	55,312,422
Standard Cargo	475	4,694,361
Emergency Cargo (Liberty)	2,708	29,182,456
Victory Cargo	414	4,491,650
Passenger and Cargo	11	106,557
Tanker	678	10,934,285
Minor Commercial Types	602	2,600,258
Military Types	682	3,302,855

The Liberty ship, it will be observed, accounted for more than half the deadweight tonnage completed during 1941–45. This design originated with an order for 60 vessels placed with American yards by the British late in 1940, and was an adaptation of a British coal-burning riveted ship known as the Sunderland Tramp.[88] Since speed of construction was essential, the fact that the basic plans were available was an important consideration. Reciprocating engines, oil-fired, were used in the Liberty ship because they could be procured promptly and without encroaching on the Navy's turbine and diesel requirements for combatant vessels. The substitution of electric welded for riveted seams also meant a saving of time and labor. The construction plan included extensive prefabrication of parts and assembly-line methods. The original contracts contemplated completion in 210 days. The first Liberty to be delivered, the *Patrick Henry,* required 244 days to build, but gradually the time for standard Liberties was reduced until it reached an average of about 42 days in the late months of 1943. December 1943 produced the lowest monthly average—39.2 days. The Liberty ship was criticized because of its slow speed (11 knots), faults of design, and structural weaknesses; it was justified, as an emergency design, on the basis of its large capacity and the rapidity with which it could be produced. Although basically a cargo design, it was converted for use as a troop transport, hospital ship, prisoner of war ship, tank and airplane transport, repair ship, and bulk oil and water carrier.

The Victory ship was developed from the Liberty ship design after the pressure for

[87] Rpt, United States Maritime Commission Official Construction Record—Vessels Delivered 1939 through 1945 (No. 106). Rpt shows 727 minor types completed, but this figure includes 124 tugs and 1 derrick barge for which no tonnage is included in total.

[88] *Mar Com Rpt* for period ending 25 Oct 41, p. 10; for period ending 30 Jun 45, p. 3. *Merchant Shipping,* additional rpt of the Senate Special Committee Investigating the National Defense Program, Rpt 10, Pt. 18, June 23, 1944, pp. 5–7, 15–27.

WAR-BUILT CARGO SHIPS. *The Liberty ship (top) and the Victory ship (bottom) were designed as freighters, but many were converted to carry troops. Ships of this type were built under the supervision of the U.S. Maritime Commission.*

the mass production of Liberties had eased, and the first delivery was made in February 1944. The Victory had greater speed (15 to 17 knots) than its prototype, which not only enabled it to complete its voyage faster but rendered it less vulnerable to submarine attack. Construction of this new type of vessel was undertaken against considerable opposition, which stemmed from the fact that it required more steel than the Liberty and propulsion machinery that was less readily available.[89] Although basically a cargo carrier, numerous Victory ships were converted to troop transports, APA's, and AKA's. The standard Victories delivered in May and again in June 1945 required an average of 73 days for completion, which was the lowest monthly average.[90]

The so-called "standard cargo" ships were types which had been developed by the Maritime Commission before the beginning of the war in Europe. These vessels had speeds ranging from 14 knots for the C–1 to 17 knots for the C–4. By conversion they were made to serve as troop transports, APA's, AKA's, and hospital ships. Since they were produced by more conventional methods, the standard types required longer periods for completion than the Liberties and the Victories. For example, the lowest average completion time for C–2's delivered during a wartime month was 113 days.[91]

"Military types" included both vessels that were basically merchant types but which had been converted to serve the Army and the Navy in overseas areas, and distinctly naval designs. In the former class were the Liberties, Victories, and standard cargo types which were altered to serve as troop transports, APA's, AKA's, and escort aircraft carriers, and the tankers which the Navy used in large numbers. In the latter class were the LST's and the frigates (small escort vessels).

While barges, carfloats, and other vessels for inshore work were included among the "minor commercial types," a considerable part of the tonnage of this category was made up of cargo vessels and tankers of from 2,500 to 5,000 deadweight tons, which were required for military purposes in the oversea theaters.

The fact that, despite the great need for troop and cargo carriers, tankers accounted for approximately one-fourth of the total deadweight tonnage built by the Maritime Commission during the war years testifies to the great quantities of petroleum products required by the Allies and the heavy losses sustained by this type of vessel under the concentrated attack of German submarines.[92]

This remarkable American shipbuilding record during World War II was achieved only by the most judicious and intensive use of facilities, labor, and materials. The expansion of shipbuilding facilities is illustrated by the fact that from 1 January 1941, by which date considerable expansion already had taken place, to the peak of the wartime effort, the number of commercial shipyards capable of building vessels more than 400 feet in length increased from 19 to 40, and the number of shipways for

[89] *Shipbuilding and Shipping*, additional rpt of the Senate Special Committee Investigating the National Defense Program, Rpt 10, Pt. 8, April 22, 1943, p. 8; WPB Special Study 26, Shipbuilding Policies of the War Production Board, 15 Apr 47, pp. 170–172 (cited hereafter as WPB Study 26), in OCT HB WPB.

[90] Hist Rpt 2, Gerald J. Fischer, Statistical Summary of Shipbuilding under the U.S. Maritime Commission during World War II, 1949, p. 83.

[91] *Ibid.*

[92] *Mar Com Rpt* for period ending 30 Jun 43, pp. 11–12.

such vessels increased from 75 to 313.[93] The number of workers employed in these yards for the Maritime Commission program increased from 47,000 in January 1941 to 591,000 in the peak month of July 1943.[94] Working conditions for shipyard employees were made as favorable as possible by government provisions for housing, feeding, local transportation, health, and safety, and by nation-wide agreements for the stabilization of wages and the equalization of working conditions.[95] Intensive training was given to as many as 90 percent of the employees of certain yards to prepare them for the better performance of their work. The principal yards were operated on 24-hour basis. The extensive use of electric welding and prefabrication permitted much construction work to be done at a distance from the congested shipyard areas.

The merchant shipbuilding program had to compete with many other military and nonmilitary programs—warships, escort vessels, landing craft, aircraft, tanks, guns, industrial plant expansion, and lend-lease requirements, to mention a few—for that basic and critical commodity, steel.[96] The competition extended to other essential materials, and, particularly as between the merchant ship and naval programs, to many component assemblies which were in short supply, such as engines, winches, pumps, valves, fans, and electrical equipment. The programs had to be co-ordinated so that the total production would most effectively support the over-all strategic plan.

The President kept under active observation the entire production schedule—military, lend-lease, civilian—and from time to time gave specific instructions regarding quantities to be produced and priorities to be observed. He recognized the essential role of ocean transport and in May 1942, when the competition between programs was keenest, he wrote to the chairman of the War Production Board with reference to the merchant shipbuilding objective for that year: "I cannot over-emphasize the necessity that this objective be met, as the success of our war effort must rest on our ability to provide the shipping required for the transportation of our troops and their supplies, and to continue the flow of essential military equipment to our associates in the United Nations." [97]

The War Production Board was the President's agent for co-ordinating and controlling the nation's entire production effort. This involved not only bringing the programs into accord with the production capacity and allocating materials and components in proper proportion, but also controlling the flow of materials and components to the individual industrial plants so as to avoid the development of uneconomical surpluses and shortages. For the better exe-

[93] Hist rpt 2, Statistical Summary of Shipbuilding, pp. 94–96. The maximum number of building berths used by Maritime Commission for vessels over 400 feet was 267. Great expansion also took place in facilities for building smaller vessels, and in plants for producing engines and other marine equipment.

[94] Hist rpt cited n. 90.

[95] *Mar Com Rpt* for period ending 25 Oct 41, p. 13; for period ending 30 Jun 42, pp. 10–12; for period ending 30 Jun 43, pp. 23–28; for period ending 30 Jun 44, pp. 11–13.

[96] Donald M. Nelson, *Arsenal of Democracy* (New York, 1946), Ch. 12, deals with the conflicting programs from WPB standpoint; WPB Study 26, pp. 1–27, further develops this subject; WPB Report of Steel Division on Steel Expansion for War, 14 Jun 45, pp. 1–42, indicates that during year ended 30 Jun 44 Maritime Commission received 44.85 percent of total steel plate shipments from mills and 56.85 percent of steel plate shipments for military uses including lend-lease.

[97] Ltr, 1 May 42, reproduced in An. II, JCS 13th Mtg, 4 May 42.

cution of this complicated task insofar as it affected shipbuilding, WPB in January 1943 appointed a Controller of Shipbuilding. This official, in addition to working closely with the Maritime Commission, the War Department, and the Navy, served as chairman of a committee appointed by the Combined Chiefs of Staff to study the simplification and standardization of ship designs as a means of increasing output and improving operating efficiency.[98]

As regards the broad range of military requirements, the Joint Chiefs of Staff kept the programs under constant review to assure that they were in adjustment with the strategic situation. The need for this had been discussed at length at a meeting of the Joint Board in February 1942. Admiral King then pointed out that the first necessities were merchant shipping and escort vessels, without which supplies and equipment could not be moved overseas. He expressed the conviction that by producing too much of certain items which could not be used immediately in the prosecution of the war we were limiting the production of other items which were needed more urgently.[99] As a result of this discussion, the Joint Planning Committee was directed to review the probable military objectives in order of priority and determine the vessels, tanks, aircraft, guns, etc., which should be produced to implement prospective operations. This became standard procedure for the Joint Chiefs of Staff, which began functioning about that time, and their supporting organizations, notably the Joint Staff Planners, the Joint Logistics Committee, the Joint Military Transportation Committee, and the Joint Production Survey Committee.[100]

It was not merely a matter of establishing proper balance between ship construction and the production of other types of war matériel, but also balance within the shipbuilding effort. First, there had to be co-ordination between the merchant vessel and naval vessel programs. In addition to the usual types of combatant vessels, which were built in sufficient numbers to establish the greatest navy in history, many minor types of naval craft were needed. Escort vessels were required to protect convoys, and throughout the greater part of 1942 and 1943 such vessels were given high priority.[101] After the invasion of North Africa, the planning for amphibious operations in Europe and the Pacific called for greatly increased numbers of landing craft, and this program remained heavy until well into 1944.[102] Beginning in 1943, and especially after the invasion of Normandy, with the attention of the long-range planners directed toward the broad ocean expanses and numerous Japanese-held objectives in the Pacific, the provision of additional combat loaders (AKA's and APA's) became a mat-

[98] CCS 191, 25 Mar 43; JMTC 43d Mtg, 29 Jul 43; WPB press release for August 22, 1943, OCT HB WPB. The Office of Controller was discontinued in March 1944, according to WPB Study 26, p. 203.

[99] JB Mtg, 20 Feb 42.

[100] Memo, JCS for the President, 20 Jul 43, sub: Logistics Planning, OPD 381, Sec IV; Memo, USN (Forrestal) for the President, 21 Sep 43; Memo, the President for SN, 28 Sep 43, sub: Navy Building Program. Last two in G–4/561. The Army and Navy Munitions Board, although technically independent, functioned in close co-ordination with the JCS organization.

[101] Ltr, the President to Donald M. Nelson, 1 May 42, reproduced as An. II, JCS 13th Mtg, 4 May 42; Memos, JCS for the President, 16 Oct 42 and 2 Jan 43. All in G–4/561.

[102] Memo, CG SOS (Somervell in North Africa) for CofS SOS (Styer), 23 Jan 43, par. 4, OCT HB Wylie Urgent Matters; WPB Study 26, pp. 134–38.

ter of primary importance.[103] This involved not only converting some of the faster cargo ships but building specially designed combat loaders which were smaller and therefore more suitable than the converted vessels for operation at Pacific beachheads and in small harbors. Every combat loader was built at the expense of more than two dry cargo vessels, because of the longer time required to build them and the amount of critical materials and equipment utilized.[104] It was estimated that the construction of 175,000 tons of tank landing ships (LST's) was at the expense of at least 775,000 deadweight tons of Liberty ships.

Also, the program for the construction of the various types of merchant ships needed careful watching to keep it in harmony with the changing requirements. Basically, the problem was to provide troop carriers, dry cargo ships, and tankers in such proportions as to avoid having an excess of one type over the others, since that would result in some vessels not being employed to the maximum.[105] Many variables entered into the calculations, but the principal considerations were changes in the strategic situation, changes in the loss rates for the several types of ships, prospective completions of ships, and oversea port conditions.[106] Immediately after our entry into the war there was urgent need for moving troops to strategic oversea bases, and a critical shortage of troop carriers was the natural result. The shortage of troop lift was relieved for the moment by altering existing American passenger vessels to increase their capacities and by arranging for the use of British liners, and the construction of new troopships was ordered with deliveries beginning in 1943.[107] As the year 1942 progressed, the heavy shipping requirements for the movement of lend-lease supplies, the increasing maintenance requirements of our growing oversea forces, and the heavy losses sustained by the freighter and tanker fleets forecast serious shortages of those types, and all possible pressure was exerted to increase deliveries under expanded programs.[108] During 1943, as antisubmarine measures cut down the loss rate for freight ships and completions of new freighters exceeded earlier estimates, it became apparent that there would be need for greater troop capacity than had been planned for. This was obtained by converting cargo vessels to troop carriers. A practical balance between troop and cargo capacities was attained in that manner, and it was maintained to the end of the war in Europe by a constant review of military plans and requirements.[109] After V-E Day the need for

[103] Rpt, Chm of WPB, *War Production in 1944*, June 1945, p. 19; Ltr, JCS (Leahy) to WSA (Land), 8 Jan 43, OCT HB Topic Mar Com Shipbuilding; WPB Study 26, pp. 177–86.

[104] Memo, CG ASF for CofS USA, 6 Nov 43, OCT HB Topic Mar Com Shipbuilding; Nelson, *Arsenal of Democracy*, p. 255.

[105] JMTC 17th Mtg, 29 Oct 42, discussed need of revision of program.

[106] See Annual Rpt, Plng Div OCT, 4 Jul 44, pp. 1–2, OCT HB Plng Div Gen.

[107] CCS 56/1, 6 Mar 42, par. 7; *Biennial Rpt, CofS USA, 1943*, n. 6.

[108] CCS 39/1, 14 Mar 42. 1943 program was the most critical and was considered repeatedly by JCS and JMTC during 1942 and 1943. See JMT 9, 12 Nov 42, sub: Modification of 1943 Shipbuilding Program; JCS 151, 13 Nov 42, same sub.

[109] See Ltr, WSA to JCS, 21 Jul 43, in JCS 420, 22 Jul 43; Statement, Plng Div OCT for CG ASF, The Problem of Personnel Versus Cargo Shipping, 2 Aug 43, OCT HB Plng Div Gen; Statement, Plng Div OCT, Maintenance of a Balanced Overseas Fleet, Feb 44, OCT HB Plng Div Gen; Statement atchd to Memo, Shipping Requirements Br Plng Div OCT for Hist Unit OCT, 21 Apr 44, OCT HB Plng Div Gen; Statement atchd to Memo, CG ASF for Sp Asst to SW, 8 Mar 44, sub: Senate Investigation, Liberty Ships, AG 564 Liberty Ships.

greatly increased troop capacity for redeployment and repatriation was met largely through further cargo ship conversions.

The Joint Military Transportation Committee, consisting of two representatives each of the Army and the Navy, kept the merchant shipbuilding programs under constant review in order to hold them in proper relationship with anticipated military shipping requirements.[110] A representative of Admiral Land, who was both chairman of the Maritime Commission and War Shipping Administrator, was invited to attend JMTC meetings as an associate member when matters of interest to those agencies were to be considered. Reports and recommendations relating to the shipbuilding program might originate with the committee, or they might follow directions issued by the Joint Chiefs of Staff that particular matters be studied. When such recommendations had been approved by JCS they were transmitted to the chairman of the Maritime Commission, who did what was necessary to give them effect, subject to general or specific directives issued by the President.[111] The interests and opinions of the armed services and the civilian agencies over which Admiral Land presided were not always identical, but a free exchange of information and views and the fact that the military requirements were recognized as paramount enabled JMTC to function in a highly effective manner.

Generals Somervell and Gross were the Army representatives on the Joint Military Transportation Committee, and they gave close attention to all aspects of its work. Somervell actually participated in the committee's work only occasionally, but he was kept informed of significant developments. Gross attended most of the meetings, supported by members of his Planning Division and sometimes by his Director of Operations or his Director of Water Transportation. His planning staff kept future supply and demand in the shipping field constantly under review and prepared frequent analyses which took into account all foreseeable developments in the strategic and logistic situation.[112] On the basis of these analyses recommendations were placed before JMTC for such adjustments in the shipbuilding program as seemed necessary to assure to the Army the amounts and types of shipping that it would require. Both Gross and Somervell looked upon JMTC as the proper and best qualified agency for dealing with such matters. They objected to the Navy's attitude, encountered during the summer of 1943, that recommendations of JMTC to the Joint Chiefs of Staff, if questioned by the Navy, should be referred to the Joint Administrative Committee for review. Somervell brought to Admiral Horne's attention the delay which this procedure entailed; he stated that the Army was prepared to stand by the actions of its representatives on the Joint Military Transportation Committee and urged that the Navy adjust its representation so that it could do likewise.[113]

[110] For charter of JMTC see JCS 202/16/D, 11 May 43, and JCS 202/27/D, 13 Oct 43. Representative of AAF was invited to meetings at which matters of special interest to AAF were considered. JCS 20/2/D, 30 Jun 45, increased membership of Army and Navy to 3 each to permit G–4 to be represented.

[111] See Ltrs, Admiral Leahy to Admiral Land, 17 Sep 42, 8 Jan 43, 2 Mar 43, OCT HB Topic Mar Com Shipbuilding.

[112] Copies of numerous studies are in OCT HB Plng Div Studies, and OCT HB Gross Analyses Trans.

[113] Memo, 12 Jul 43, sub: Navy Representation on JMTC, AG 334 JMTC. Operating as well as shipbuilding matters were involved.

The Combined Chiefs of Staff, the Combined Military Transportation Committee, and the related American-British organizations did not ordinarily deal directly with the American merchant ship construction program, but because of their concern with the utilization of Allied resources and the success of Allied strategy their deliberations touched that field on a number of occasions. In the summer of 1942, when the shortage of steel was a governing factor in determining the amount of merchant ship and naval construction that could be undertaken, Mr. Harry Hopkins, as Chairman, Munitions Assignment Board, referred to CCS a memorandum from the Munitions Assignment Board (Navy), recommending an increase in the American escort vessel program, which under the circumstances would involve a decrease in the merchant vessel program.[114] When the matter was presented at a CCS meeting, General Marshall stated that the U.S. Chiefs of Staff already had it under consideration and recommended that since only American shipbuilding was concerned the memorandum should be referred to the Joint Chiefs of Staff. Several weeks later it was reported that upon recommendation of JCS the President had reduced the merchant shipbuilding objective for 1942–43 from 28,000,000 to 24,000,000 deadweight tons.[115] The question of the adequacy of the escort vessel and landing craft programs came before the combined organizations from time to time thereafter, but without direct reference to the amount of merchant shipping to be built in the United States.

[114] CPS 33/D, 9 Jun 42, Incls A, B, C; CCS 25th Mtg, 16 Jun 42, Item 1; see CCS 118, 15 Oct 42, for British position.

[115] CCS 30th Mtg, 2 Jul 42, Item 2; JCS 70, 11 Jul 42, Items 3 and 4. The cut in the program was later restored.

An appreciation of the American shipbuilding achievement requires consideration of the programs of the Navy and the Army, which competed with the Maritime Commission for facilities, materials, equipment, and labor. During the years 1941–45 the Navy completed under its own contracts a total of 10,735 new vessels, including combatant, amphibious, auxiliary, mine, patrol, and service vessels. In addition the Navy completed about 98,000 small landing craft and other small boats. The Army under its own contracts completed about 13,900 small vessels and other items of floating equipment.[116]

Central Control of Ship Employment

Because of the persistent scarcity of bottoms to carry out Allied military designs, it was necessary that the available shipping be employed in the most effective manner. As already indicated, that necessity was forecast well before the United States entered the war, and early in 1941 the President tooks steps to place the greater portion of the American merchant fleet under the control of one agency, the Maritime Commission. There remained, however, the problem of determining how ships in the pool should be used to best serve the national interest. During 1941 and the early months of 1942 this problem remained unsolved. The Maritime Commission, and the War

[116] New Navy vessels (10,735) based on Ltr, BUSHIPS USN to C of Hist Div SSUSA, 27 Mar 50, excluding vessels built for Navy by Mar Com, OCT HB Topic Navy. Navy small landing craft and small boats (98,000) based on Admiral King's rpt, cited n. 73 above, which includes limited number of used vessels. Army completions from WD, Report of Army Small Boats Constructed, 1 July 1940 to 31 May 1945, 18 Dec 45, are extended to 31 Dec 45 by data from Supply Div OCT, OCT HB Water Div Small Boats.

Shipping Administration after its establishment early in February 1942, were confronted with the difficult task of allocating vessels to meet the needs of the Army and the Navy and fulfill lend-lease commitments, while at the same time maintaining what were considered essential commercial services. That was a task which under the circumstances could not possibly be performed to the satisfaction of all parties. The deficit in ships had to be distributed—there was no alternative.[117]

It was the hope of the President that the Strategic Shipping Board, which he established soon after we entered the war, would be an effective instrument for planning ship allocations. It failed to accomplish that purpose, however, because of the differing views held by the participating agencies—the Army, the Navy, and the Maritime Commission.[118] The Army submitted its requirements to the Maritime Commission and later to the War Shipping Administration but received no better assurance than that every possible effort would be made to meet them.[119] The President gave specific directions from time to time regarding the utilization of ships, and at that period there seemed to be no other means of resolving differences between the several claimant agencies than by appeal to the Chief Executive.[120]

Aside from ships to carry out immediate tasks, the Army's great need was for a long-range plan for the distribution of shipping to enable it to determine in advance, and with reasonable assurance of fulfillment, the number of troops and the tons of cargo it would be able to move overseas during the ensuing year. As a step in that direction a plan for the distribution of cargo shipping during the remainder of 1942 was worked out early in March, in conferences between representatives of the Army, the Navy, the Lend-Lease Administration, and the War Shipping Administration.[121] This preliminary step in long-range planning was followed by the development of more permanent procedures.

While these early difficulties were being encountered in connection with the employment of shipping under the American flag, the same problem was being dealt with on an international scale. Co-ordination of the employment of American and British bottoms so as to obtain maximum results for the Allied cause was undertaken informally at the British-American conferences which began in Washington late in December 1941, and more systematic standing procedures soon were developed. The

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[117] Memo, ACofS G–4 for CofS USA, 12 Jan 42, sub: Shipping Capabilities to Reinforce ABDA Region, Trans Br G–4/560 Mar Com; Memo, Chm Mar Com for the President, 17 Feb 42, sub: Conf with Hopkins, Somervell, Gross, Trans Br G–4/560 Mar Com; Memo, ACofS G–4 for CofS USA, 20 Feb 42, sub: Acquisition of Vessels for Contemplated Movements; Memo, CofS USA for the President, 21 Feb 42, same subject. Last two in G–4/29717–115.

[118] See Bureau of the Budget, *The United States at War* (Washington, 1946), pp. 148, 149. See also n. 61, Ch. II, of this volume.

[119] Memo, C of Trans Br G–4 for ACofS G–4, 26 Dec 41, sub: Conf with Mr. Harry Hopkins, OCT HB Gross Day File; Memo, ACofS G–4 for Chm Mar Com, 31 Jan 42, OCT HB Gross Analyses Trans; Ltr, WSA for CG SOS, 4 Mar 42 (SOS was not established officially until 9 Mar 42), OCT HB Gross Day File.

[120] Memo, ACofS G–4 for Rear Adm Taffinder USN, 14 Feb 42, sub: Use of Navy Transports for Movement to X, OCT HB Gross Day File; Memo, ACofS G–4 for CofS USA, 20 Feb 42, sub: Acquisition of Vessels, with draft of memo for signature of President, for Chm Mar Com, directing assignment of troop and cargo ships to Army for movement to Pacific, G–4/29717–115.

[121] Memo, ACofS G–4 for CofS USA, 7 Mar 42, sub: Allocation of Cargo Shipping for 1942, OCT HB Gross Day File.

Combined Shipping Adjustment Board, a high-level civilian agency responsible directly to the President and the Prime Minister, was established in January with branches in Washington and London.[122] Its function was to propose such exchanges of British and American shipping as would produce the best over-all results, taking into account civilian and lend-lease requirements as well as military needs. The Combined Chiefs of Staff, which began functioning in February, dealt primarily with the military aspects of shipping, but in its estimation of military requirements and its effort to propose sources from which those requirements could be met, CCS necessarily took into consideration the possibility of reducing civilian and lend-lease shipping services. The effective utilization of shipping was an inevitable subject for consideration at the recurrent meetings of the President, the Prime Minister, and the heads of other Allied governments for the determination of strategy, on which occasions both the civilian and the military aspects were reviewed.

The shipping which served the Allies, excluding those vessels which were more or less permanently assigned to the armed services, was operated in two large pools, one under control of the War Shipping Administration and the other under the control of the British Ministry of War Transport. The pools included not only the merchant fleets of the Allied countries but as much neutral tonnage as could be chartered and such enemy vessels as had been interned or captured. Exchanges of shipping between the British and American pools usually did not involve changing flags or operating controls but merely the assignment of the use of a vessel or vessels for a voyage or a period. The United States, however, transferred many vessels to the flags and the controls of other nations, chiefly the United Kingdom and the Soviet Union.[123] On 1 January 1942, a few weeks after the entry of the United States into the war, the ocean-going merchant shipping available to the Allies totaled 44,390,000 deadweight tons. By 30 June 1945 the total had increased to 88,035,000 deadweight tons, of which 52,648,000 were available to the United States and 35,387,000 to other United Nations, principally the British Commonwealth. Of the total for 30 June 1945, 66,228,000 deadweight tons were accounted for by dry cargo and passenger vessels and 21,807,000 deadweight tons by tankers.[124]

The Joint Chiefs of Staff, the American component of the Combined Chiefs of Staff, had an important role in determining the employment of shipping. In regard to strategic and logistic matters, of which shipping was at all times an essential element, JCS performed the dual function of planning and controlling the American military operations and representing the American interests in the combined deliberations. JCS determined the employment of the shipping which was made available to the American

[122] Memorandum of Organization, 19 Feb 42, signed by Admiral Emory S. Land and Sir Arthur Salter, members of Washington branch, states purpose, policies, and principal tasks of CSAB, OCT 334 CSAB. Members of London branch were W. Averell Harriman for U.S. and Lord Leathers for UK. See Bureau of Budget, *The United States at War*, p. 151.

[123] "WSA Announces Charter Pool to Supply Allies with Ships," *Journal of Commerce* (New York), July 30, 1943. WSA Shipping Summary, 30 Jun 45, p. 16, shows total of 427 U.S. vessels lend-leased to other countries, including 325 to UK and 98 to USSR. The number increased subsequently.

[124] CCS 203, 24 Apr 43, p. 8; ASF MPR, Sec. 3, Jul 45, p. 65.

TROOPSHIPS IN THE U.S. POOL. *The* Mariposa, *a prewar American passenger liner (top), and the* John Ericsson, *a former Swedish vessel (bottom). Both were operated by agents of the War Shipping Administration.*

armed forces and estimated the volume and types of shipping which future operations would require. Despite the inevitable conflict of interests between the Army and the Navy, JCS dealt with the shipping aspects of its work in an effective manner. The fact that the President was represented on JCS by Admiral William D. Leahy, Chief of Staff to the Commander in Chief of the Army and Navy, facilitated decisions and meant that it was not often necessary to call on the Chief Executive himself to settle differences relative to the utilization of shipping.

The basic work for the Combined and Joint Chiefs of Staff in regard to the employment of shipping was done by the Combined and Joint Military Transportation Committees.[125] The numerous studies prepared by these committees covered the entire range of Allied shipping operations. They provided the transportation calculations upon which the parent organizations, and the heads of governments at their occasional meetings, based their strategic and logistic decisions. They provided the data for determining the deployment of shipping to most economically and effectively implement strategic decisions. The strategic proposals of the Combined and Joint Staff Planners were necessarily hypothetical until they had been translated into terms of shipping by CMTC and JMTC and their practicability tested in the light of total shipping requirements and the capabilities of the vessels expected to be available. Those committees estimated the loss rates to be used in determining, for planning purposes, the amount of shipping likely to be available at specific future dates. They dealt not only with the employment of blocks of tonnage but on occasion with the assignment of specific vessels to specific tasks. They gave attention to the efficiency with which shipping was employed and made proposals for improving the dispatch of vessels at ports, reducing the time required for round voyages, and regulating the retention of ships in the theaters for storage purposes or for intratheater operations.

Authority to allocate the shipping under United States control to the several uses rested with the War Shipping Administration, under Presidential directive. In the exercise of that authority WSA was obliged to take into account, in addition to military requirements as formulated by JCS, the President's views and commitments relating to lend-lease, decisions of the President's Soviet Protocol Committee, policies of the Bureau of Economic Warfare and the State Department pertaining to international relations, and the need for strategic imports. Because there usually was not enough shipping to meet all needs fully, and in order to avoid the delays to strategic and logistic planning which resulted from adjustments in its shipping program after such planning was well progressed, JCS endeavored to effect a distribution of the deficit among the several programs as early as possible. To accomplish this a representative of WSA was invited to sit as an associate member with the Joint Military Transportation Committee. This representative had knowledge of lend-lease and civilian shipping plans as well as of the prospective availability of bottoms, and with his assistance JMTC was able to work out many adjustments and eliminate many conflicts which would have resulted if the several programs had been established en-

[125] CCS 24, 2 Feb 42, Item 1, records establishment of CMTC, and CCS 24/1, 10 Feb 42, states functions and composition.

tirely independently of each other. Despite this attempt to place the respective programs on a realistic basis in their early stages, there still were conflicts which had to be settled ultimately by the President.[126]

A similar procedure was followed by the Combined Military Transportation Committee in endeavoring to adjust programs which affected both British and American shipping. Representatives of the British Ministry of War Transport and the War Shipping Administration sat with this committee when shipping allocations were being considered. The problems of CMTC differed from those of JMTC, however, because the broad aspects of the employment of the combined British-American shipping resources were in large measure covered in the strategic decisions of the President and the Prime Minister.

General Gross, as a member of both the Joint and the Combined Military Transportation Committees, consistently took the position that military requirements, that is, requirements of the Army and the Navy, should have first priority in the allocation of cargo vessels.[127] In support of this position he could cite the language of the executive order creating WSA, which stated: "In allocating the use of . . . vessels, the Administrator shall comply with strategic military requirements." This attitude was reflected in a study, prepared under his supervision in January 1942, regarding the availability of shipping for troop movements. It was evidenced a few weeks later in his criticism of preliminary proposals concerning the establishment of CMTC, which he felt left the allocation of shipping too much in the hands of the Combined Shipping Adjustment Board, a civilian agency. It found expression in a memorandum for record, prepared in December 1942 after a conference with Mr. Harry Hopkins, in which he stated that the allocation of additional ships to the Russian lend-lease program was a strategic decision which should be made by the Joint Chiefs of Staff. It was reflected again in his remarks before CMTC regarding the "devastating" effect which the proposed allocation of American vessels to the British import program would have on plans for the movement of American troops to oversea theaters in 1943.

The Army's Chief of Transportation made a clear presentation of his views on this subject, which he indicated were shared by the U.S. Navy, at meetings of the Combined Military Transportation Committee early in 1945 when consideration was being given to the supply of cargo shipping in relation to projected military operations.[128] He contended specifically that military requirements should have first priority and that until those requirements had been met the other programs should be subject to clearance by the military authorities. The opposite view, expressed by the representative of the War Shipping Administration and supported by British military and civilian representatives, was that the military authorities had not been vested with control

[126] See monograph by Col M. B. Stokes, Jr., C of Plng Div OCT, Shipping in War, 22 Mar 46, pp. 8–10, OCT HB Topic Logistics Gen.

[127] EO 9054, 7 Feb 42, par. 4; Memo, ACofS G–4 for CofS USA, 19 Jan 42, sub: Maximum Troop Movement . . . if Given First Priority, OCT HB Gross Day File; Memo, C of Trans Br G–4 for ACofS G–4, 30 Jan 42, sub: Navy Draft of Paper Setting up CMTC, G–4/33813–1; Memo for record by Gross, 30 Dec 42, sub: Conf with Hopkins, OCT HB Gross Day File; CMTC 61st Mtg, 15 Mar 43, Item 1; see also Memo, CofT for CofS USA, 17 Mar 43, ASF Hq Shipping, 1942–43.

[128] CMTC 92d Mtg, 2 Jan 45, Item 1; CMTC 93d Mtg, 12 Jan 45, Item 1; Memo, CG ASF (Styer) for ASW (McCloy), prepared 15 Jan 45, sub: Recommendations on Cargo Shipping, OCT HB Wylie Staybacks.

over allocations for nonmilitary programs and that decision regarding the shipping to be utilized by such programs rested with the heads of governments. As has been indicated, the latter was a correct statement of the manner in which the broad aspects of ship allocations were dealt with throughout the war. Since lend-lease and the civilian economy were so thoroughly interrelated with the military program it is a matter of conjecture how different the allocations would have been if the procedure advocated by Gross had been in effect.

The Joint Military Transportation Committee dealt with long-range programs for the utilization of shipping, usually making its estimate for six-month periods but keeping those estimates constantly under review and revision. Since the Army was the largest claimant for vessels, the Chief of Transportation on his own initiative kept the entire shipping situation under study through his Planning Division. That division prepared frequent statements regarding the whole or particular phases of the ocean transportation problem, utilizing estimates of troops to be sent overseas prepared by the Operations Division of the General Staff, experience data concerning the supply requirements of troops already overseas, forecasts of the delivery of new vessels and of sinkings by the enemy, probable turnaround cycles on the several routes, the probable lay up of vessels for repairs, the probable shipping needs of the oversea commanders for intratheater operations, and other factors which required consideration. When it became apparent that the shipping allocated to the Army would be inadequate to meet its needs, that fact was brought to the attention of the Joint Military Transportation Committee, with recommendations regarding adjustments to remedy the situation. In the relatively few instances when shipping capabilities were found to permit the expansion of certain operations beyond what had been planned, JMTC was so informed.[129]

Supplementing their role in connection with the distribution of shipping, the Joint Chiefs of Staff took an active hand in improving the utilization of vessels in the theaters. Long delays in discharging cargoes in some of the oversea areas and the freedom with which certain theater commanders retained transoceanic ships for use in intratheater operations appreciably reduced the number of bottoms available for outward loading from the United States and thus accentuated the effect of the shipping shortage on all military programs. Late in 1944, when the accumulation of shipping in oversea ports became so serious as to call for Presidential intervention, JCS took drastic action to reduce the congestion which already existed and established rules which were intended to prevent the recurrence of such a situation. The effect of these actions will be discussed in a later chapter of this volume.

The Army and the Navy negotiated numerous agreements outside the Joint Chiefs of Staff, which affected the employment of the ships under their control. Since the two services worked side by side in the theaters, co-ordination was necessary to avoid needless duplication and resultant waste in their supply and shipping operations. This was particularly true in the Pacific where the Navy's logistic responsi-

[129] Concerning functions and methods of Plng Div, see its annual reports; Col M. B. Stokes, Jr., C of Plng Div, Presentation Before Army Service Forces Headquarters Staff School, undated; Statement prepared in Plng Div, 28 Sep 45, sub: Plng for Ocean Shipping. All in OCT HB Plng Div Gen.

bilities were larger then elsewhere. An effort for co-ordination, which General Gross fully endorsed and supported, brought success in some directions and frustration in others.

The first significant agreement of that nature, entitled "Joint Logistics Plan for the Support of United States Bases in the South Pacific," was adopted in July 1942.[130] Its purpose was to reduce the waste which had resulted from the maintenance of wholly independent supply systems in the South Pacific Area, where joint bases were set up during the early months of the war. Supplies which were in common use were broken down into categories, and responsibility for each category at each base was assigned either to the Army or the Navy. The commander of the South Pacific Area (a naval officer) was given control of all United States shipping assigned to the area and over-all responsibility for the distribution of supplies within the area. A Joint Purchasing Board was established at Wellington to procure such supplies as were available in New Zealand and Australia and thus to reduce the weight of the requisitions sent to the zone of interior and the amount of shipping utilized in filling them. That agreement served as a prototype for arrangements affecting other areas.

In February 1943 a series of agreements was approved by the two departments, providing for a division of responsibilities in order to avoid overlapping in the supply and transportation of food and petroleum products for Army and Navy personnel at certain Atlantic and Caribbean bases and in Africa and the British Isles.[131] During the following month a further and broader agreement was signed, the purpose of which was to "insure co-ordinated logistical effort and procedure in each command area . . . involving joint Army-Navy operations in which unity of command and responsibility has been established to the end that the combined personnel, equipment, supplies, facilities, shipping and other services of the Army and Navy are most effectively utilized and adequately provided." [132] Under this Basic Logistical Plan each oversea area commander was required to effect co-ordination of all existing agencies charged with the planning, conduct, and supervision of logistical services within the area, and Army and Navy seaboard agencies in the United States which served such areas were charged with co-ordinating the allocation of shipping and the loading and routing of ships.

The Chief of Transportation informed the commanders of the several ports of embarkation that while the principles of the Basic Logistical Plan were especially applicable to the Pacific they were to be applied to some extent to other ports, and directed the Army port commanders to initiate conferences with the corresponding naval commanders in order to implement the agreement.[133] The port commanders were instructed also to take the initiative in forming committees, including representatives of the War Shipping Administra-

[130] Plan signed by Admiral Horne and General Somervell, 15 Jul 42, OCT HB Topic Army-Navy Joint Logistics.

[131] Joint Memo, CG SOS USA and VCNO USN for Army and Navy comdrs at home ports and oversea bases, 27 Feb 43, sub: Army and Navy Agreements Relating to Supply of Food and Petroleum Products in Atlantic, OCT HB Topic Army-Navy Joint Logistics.

[132] Agreement, Basic Logistical Plan for Command Areas Involving Joint Army and Navy Operations, promulgated by TAG USA, 7 Mar 43, and by CinC U.S. Fleet, 8 Mar 43, OPD 381 (120-140).

[133] Memos, ACofT for port comdrs, 7 Mar 43 and 24 Mar 43, OCT HB Topic Army-Navy Joint Logistics.

tion as well as the Navy, to deal with the employment of shipping, longshore labor, and ship repair facilities. Special instructions were sent to the Army port commander at San Francisco, where a committee of Army, Navy, and WSA representatives already had been set up and was functioning informally.[134] He was advised that the shipping schedules worked out by the committee should be forwarded to Army and Navy commanders in the respective oversea areas, with requests that they submit joint statements of priorities based on the anticipated movement capabilities. He was informed that all cargo vessels, whether owned or chartered by the Army or the Navy or allocated to them by WSA, were to be considered available for either or both services for use in accordance with the joint priority lists established in the theaters. The San Francisco port commander was advised further that while the approved plan applied only to cargo, a similar arrangement regarding troop movements was desirable, since the Army believed that the Navy sometimes asserted priority rights to troop space because the vessels were operated by or allocated to the Navy, not because naval personnel was the more urgently needed overseas.

In May 1943 the Basic Logistical Plan was supplemented with an agreement which directed that a single joint priority list be prepared for personnel moving to all areas of the Pacific, except the northern and southeastern areas, and that standing operating procedures be established for the implementation of the priority lists contemplated by both the original and the supplementary agreements.[135] Soon thereafter a general plan for the administration of joint priorities for personnel moving from west coast ports to the Central, South, and Southwest Pacific Areas was adopted.[136] The Chief of Transportation then proposed more detailed joint procedures for cargo as well as personnel movements, including strong central control of shipping, but after consideration of the proposal the Navy stated that it considered such further action unnecessary.[137]

The question of joint cargo priorities continued to receive attention, but an arrangement wholly satisfactory to the Army was not achieved. Although joint cargo priority lists were prepared by the commanders of the respective Pacific theaters, means of establishing proper balance between the theaters was lacking, and this was a serious weakness in view of the scarcity of shipping and the competition between the oversea commanders for cargo space.[138]

The Joint Army-Navy-WSA Ship Operations Committee, which was set up informally at San Francisco early in 1943,

[134] Ltr, CG SFPE to CofT, 6 Feb 43, OCT HB Gross Day File; Ltr, ACofT to CG SFPE, 7 Mar 43, OCT HB Topic Army-Navy Joint Logistics.

[135] Agreement, CofS USA and COMINCH, 26 May 43, sub: Joint Priority List for Pacific Shipments, OCT HB Topic Army-Navy Joint Logistics.

[136] Memo, Dir NTS and CofT for Comdt Twelfth Naval Dist and CG SFPE, 7 Jun 43, OCT HB Topic Army-Navy Joint Logistics.

[137] Memo, CofT for Dir NTS, 1 Jul 43, sub: Joint Troop and Cargo Movements West Coast, OCT HB Topic Army-Navy Joint Logistics; 1st Memo Ind, Dir NTS for CofT, 28 Jul 43, OCT HB Topic Army-Navy Joint Logistics; Memo, Dir NTS for CofT, 5 Jun 44; Memo, CofT for Dir NTS, 7 Jun 44. Last two in OCT 563.5 Pacific Ocean Areas.

[138] For OCT view see Ltr, Lt Col R. D. Meyer, Deputy Dir of Opns during the war, to C. C. Wardlow, 21 Jul 49, OCT HB Army-Navy Joint Logistics. Concerning Navy experience with cargo priorities see Duncan S. Ballantine, *U.S. Naval Logistics in the Second World War* (Princeton, 1947), pp. 229–33.

undertook to co-ordinate the shipping activities of the three agencies in order to obtain the best possible utilization of ships sailing from the Pacific coast in accordance with determinations of the Joint Chiefs of Staff and to control the use of port facilities. In November 1943 the Navy, which was in process of vesting greater authority over naval logistics in its Pacific coast organization, proposed that the committee's functions be more clearly defined.[139] The Army objected to certain provisions in the Navy's draft of an agreement, which it believed might be so interpreted as to give the committee greater control over ship and port operations than the Army was willing to accord.[140] In the Office of the Chief of Transportation critics of the proposed agreement argued that in view of the tight transportation situation and the necessity of controlling steamship and railway operations and troop and supply movements from a central point, it would be unwise to decentralize to the San Francisco committee any of the functions then being performed in Washington. Following a conference between General Somervell and Admiral Horne, and after modifications had been made in the text of the agreement to meet the Army's objections, signatures were affixed in February 1944.[141]

The difficulties encountered in the negotiation of this agreement reflected the basic difference between the Army and Navy logistic systems, the former being based on centralized control while the latter was relatively decentralized. The agreement made clear that the duties of the San Francisco joint operations committee were not being extended.[142] It provided that "similar committees with the same functions" should be set up at Los Angeles and Seattle. It stated that the Army port commanders would act independently with respect to ship operations in order that they might "be more responsive to the daily control exercised by Washington over the integrated movements of troops and supplies from origin to destination."

Despite the limitation placed on their authority relating to ship operations, the west coast joint committees performed a useful function in connection with the movement of troops and supplies to the Pacific. Their role in regard to the administration of priorities and the utilization of port facilities was an important one. The San Francisco committee, which had the central role, included the commandant of the Twelfth Naval District (later the Pacific Coast Coordinator of Naval Logistics), who

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[139] Draft of Memo prepared by Navy, 19 Nov 43, sub: Pacific Coast Joint Committee for Shipping, Shipbuilding and Repair, OCT HB Gross Pacific Coast Joint Committee. For developments in Navy's logistical organization see Ballantine, *U.S. Naval Logistics*, pp. 208–15.

[140] Memo, CG ASF for VCNO (Horne), 15 Dec 43; Memo, VCNO for CG ASF, 23 Dec 43; Memo, CG ASF for VCNO, 28 Dec 43; Memo, C of Water Div OCT for CofT, 8 Feb 44; Memo, DC of Traf Contl Div for CofT, 8 Feb 44. All in OCT HB Gross Pacific Coast Joint Committee. See also Tel Conv, ACofT and CG SFPE, 20 Apr 44, and Memo, CG SFPE for CofT, 24 Apr 44, OCT 370.5 POA (Geog file, 2d Sec).

[141] Memo, CG ASF for VCNO, 11 Feb 44, and agreement signed 12 Feb 44, OCT HB Gross Pacific Coast Joint Committee.

[142] Members of this committee also served on Pacific Coast Joint Committee for Shipbuilding and Ship Repair. For functions of committees and their working subcommittees see chart prepared by SFPE, 7 Aug 43, and Ltr, CG SFPE to CofT, 8 Oct 45, OCT HB Topic Port Co-ordination. For minutes of meetings see OCT 334 Joint Army-Navy-WSA Opns Com.

acted as chairman, the commander of the Army port of embarkation, and the west coast representative of the War Shipping Administration.

The distribution of allocated cargo shipping for use in the Pacific was a matter of continuous concern to the Chief of Transportation.[143] From the beginning the Navy was believed to be maintaining excessive standards in the operation of its oversea bases, particularly in the extent and character of the construction work, which made its demands upon shipping unnecessarily heavy. In the spring of 1944 General Gross presented computations relating to the several Pacific areas, from which he deduced that on the average each Army cargo sailing was supporting twice as many men as a Navy cargo sailing. In working out the monthly allocations of ships in Washington it was found that the estimated requirements submitted by the Navy's west coast representative were not closely calculated.

Another problem from the Army standpoint arose from the fact that the vast Pacific Ocean Areas, embracing what were known in the early part of the war as the Central Pacific and the South Pacific, were under a Navy commander, and all WSA allocations of cargo vessels for operation west of Hawaii were made to the Navy. The Chief of Transportation considered his lack of control over the ships moving supplies to Army forces in that area a handicap.[144] Lack of information concerning ship movements and port activities in POA also was a source of inconvenience, not only in Washington but also to the Army command in the Southwest Pacific to which some of the vessels were destined.[145] The shipping situation in POA was given careful consideration by the Joint Chiefs of Staff and the Joint Military Transportation Committee during the greater part of 1944. The resultant agreement, however, did not substantially alter the Army's position, since it provided for the continued allocation of cargo ships to the theater commander, who was to reallocate them to the Army, the Navy, and the subarea commanders "in accordance with the requirements of the overall military situation." [146]

Although the Army was given strong representation on the POA logistics staff, the plan of ship allocation for that area never was considered a satisfactory one by the Chief of Transportation, who as late as May 1945 remarked that while the plan had "functioned" it had not done so with-

[143] Memo, CG SOS for CofS USA, 4 Dec 42 (approx), sub: Trans Requirements Pacific Theater, G-4/561; Joint Memo, Lt Col A. W. Parry and Lt Col R. G. Lehnau for Gen Robinson Contl Div ASF, 12 May 43, par. 5c, sub: Rpt on Insp Trip, OCT HB Gross Pacific Theater; Memo, CofT for Gen Wood Plns and Opns Div ASF, 9 Mar 44, OCT HB Gross Pacific Theater; Opns Mtg OCT, 14 May 44, sub: West Coast-Navy, OCT HB Opns Council Mtgs.

[144] Memo, Deputy Dir of Opns OCT for CofT, 31 Oct 44, OCT HB Wylie Supply and Shipping in Pacific 1944–45; Memo, CofT for CG ASF, 14 Nov 44, sub: JCS 1087/5, OCT HB Gross Joint Army-Navy Trans.

[145] Memo, C of Mvmts Div OCT for Dir of Opns (Wylie), 15 Nov 44, OCT HB Mvmts Div Gen; Memo, C of Ship Contl Br Contl Div OCT for Deputy Dir of Opns (Meyer), 21 Nov 44, OCT HB Wylie Supply and Shipping in Pacific 1944–45; Ltrs, CofT to Maj Gen Edmond Leavey ACofS for Logistics POA, 24 Oct and 25 Nov 44, OCT HB Gross Pacific Theater.

[146] Memo, CINCPOA for CNO, 20 Oct 44, sub: Centralization of Contl of Cargo Shipping in POA OCT HB Meyer Staybacks; Memo, Deputy Dir of Opns for CofT, 31 Oct 44, sub same, OCT HB Meyer Staybacks; Memo, CG ASF for CofS USA, 11 Dec 44, sub: Procedure for Allocation and Contl of Cargo Shipping in POA, OCT 565.2 POA; JCS Policy Memo 8, 26 Dec 44.

out "anguish to the Army."[147] General Gross believed that the only way he could be sure of fulfilling his responsibility for supplying the Army forces in POA was to have control of the ships which transported the supplies.

During the spring of 1945, in anticipation of the surrender of the German forces and the intensification of the war against Japan, the Navy proposed that a joint conference be held to discuss supply and shipping problems in the Pacific.[148] The designation of General Douglas MacArthur as commander of all Army forces in the Pacific (CINCAFPAC) and Admiral Chester W. Nimitz as commander of all Navy forces in the Pacific (CINCPAC) presented a new command set-up which necessitated new arrangements in regard to ocean transportation. In addition to representatives of the Navy Department, the Army Service Forces, and the Army Air Forces, representatives of the land, sea, and air commands in the Pacific were invited to the conference. The discussions were held in Washington, 1–5 May 1945, under the chairmanship of Admiral Royal E. Ingersoll, Commander, Western Sea Frontier. According to a report filed with the Assistant Chief of Staff, G–4, agreement was reached on all matters except the control of shipping.[149]

The Navy plan presented at the conference was that all shipping matters should be dealt with by a joint organization to be established by General MacArthur and Admiral Nimitz. The Army, recalling its unsatisfactory experience in the Pacific Ocean Areas where a joint logistics staff had existed, contended that such an arrangement would be unduly cumbersome and slow. The Chief of Transportation and other Army representatives at the conference proposed that the Army and the Navy commands in the Pacific make their shipping arrangements separately—which it was believed would be more satisfactory and entirely practical in most instances—and that joint control be established only when the exigencies of joint operations or other circumstances rendered such control necessary.[150] The discussion brought out the fact that the Seventh Fleet, serving in the Southwest Pacific under an Army commander, had had complete independence in logistical matters until early 1945, and that afterward the Army commander had reviewed the Seventh Fleet requests for supplies in the light of the over-all capacity of the ports but had not undertaken to control its shipping operations. By way of contrast, it was stated that shipping for the supply of Army forces in POA west of Hawaii had been completely under Navy control. The conference ended without either service modifying its position on the point at issue.

Early in June the Navy placed the question of control of shipping in the Pacific

[147] 3d Mtg, Army-Navy Supply and Shipping Conf, 1–5 May 45, p. 69, files of Plans and Policy Group, P&O Div, GS USA, ABC 337 (1 May 45). For fuller discussion of shipping arrangements in POA see Col David H. Blakelock, Notes for Lecture on Joint Overseas Trans Problems, 27 Jan 47, OCT HB Topic Army-Navy Joint Oversea Trans Problems.

[148] JCS 1259/4, 3 Apr 45, sub: Command and Operational Directives for the Pacific; Memo, ACofS ASF for CG ASF, 10 Apr 45, sub: Study of Supply and Shipping Problems Relative to Support of Pacific War; Memo, CNO for CG AAF, 17 Apr 45. Last two in G–4/400.22, Vol. II.

[149] Memo, C of Policy Br G–4 USA, 7 May 45, G–4/400.22, Vol. II.

[150] Army-Navy Supply and Shipping Conf, 1–5 May 1945, esp. pp. 66–80 of 3d mtg and pp. 8–13 of 4th mtg, files of Plans and Policy Group, P&O Div, GS USA, ABC 337 (1 May 45).

formally before the Joint Chiefs of Staff.[151] It recommended that CINCAFPAC and CINCPAC be directed to set up a joint agency for the co-ordination and control of all merchant-type shipping except assault craft. A meeting between CINCAFPAC and CINCPAC had been held on Guam, 1–4 June 1945, during which the shipping problem had been discussed and estimates of shipping requirements to February 1946 had been prepared.[152] The Army Chief of Staff requested the opinion of CINCAFPAC with regard to the joint agency recommended by the Navy, and was informed by General MacArthur that he was opposed to the arrangement since it would deprive the Army of control of the shipping serving

[151] JCS 1286/6, 5 Jun 45, sub: Joint Agency for Co-ordination of Shipping within Pacific.

[152] Rad, CINCPOA Adv Hq for COMINCH, CM–IN 5530, 6 Jun 45. CofT found the estimates inadequate and requested more information; see Rad, OPD to CG AFPAC Manila, CM–OUT 13186, 7 Jun 45.

TABLE 4—EMPLOYMENT OF OCEAN-GOING PASSENGER AND DRY-CARGO SHIPPING UNDER U.S. CONTROL ON SELECTED DATES: 1943–1945 [a]

(Thousand Deadweight Tons)

Employment	1 Jan 43	1 Jan 44	1 Jan 45	1 Jul 45
Total	12,318	25,820	36,022	39,967
U.S. Army	4,521	10,765	17,330	13,609
U.S. Army Owned & Chartered	835	1,552	1,154	1,989
WSA Allocations to U.S. Army	3,686	9,213	16,176	11,620
U.S. Navy	2,182	4,028	8,016	11,649
U.S. Navy Owned & Chartered	1,029	2,133	4,230	4,386
WSA Allocations to U.S. Navy	1,153	1,895	3,786	7,263
Other U.S. Traffic	4,434	8,265	5,724	8,982
Allocated to U.S. Lend-Lease	2,776	5,674	3,462	4,953
Allocated to Civilian Needs	1,658	2,591	2,262	4,029
Foreign Control	165	1,591	3,490	3,699
Lend-Leased to British	0	1,059	2,919	2,872
Lend-Leased to USSR	165	532	571	827
Under Repair or Laid-up	1,016	1,171	1,462	2,028

[a] Includes merchant-type vessels of 1000 gross tons or more. Naval auxiliaries are excluded, but merchant-type vessels converted to assault vessels (AKA's and APA's) are included. WSA allocations are shown according to allocations for outbound voyages.

Source: WSA Shipping Summary, September 1945, p. 38.

its forces.[153] While he recognized the need for Army-Navy co-operation, General MacArthur favored separate shipping responsibilities; he recommended that his intra-theater shipping requirements be submitted directly to the War Department and that vessels to meet those requirements be allocated to him and be operated under his control. The Navy proposal had not been acted on by the Joint Chiefs of Staff when hostilities ended.[154]

The intricacy of the problems involved in the exercise of centralized control over the employment of U.S. shipping, as well as the Army's interest in the proper solution of these problems, are best understood when the volume and distribution of such shipping are visualized. Table 4 shows the disposition, according to outbound allocations, of the ocean-going passenger and dry cargo vessels under U.S. control at the beginning of 1943, 1944, and 1945, and in mid-1945. As of 1 January 1945, when the campaign against Germany was at its height, out of a total of 36,022,000 deadweight tons, 17,330,000 tons (48.1 percent) were at the disposal of the Army, and 8,016,000 tons (22.3 percent) were at the disposal of the Navy. Six months later, with Germany defeated and the concentration of strength in the Pacific well begun, the Army's percentage had shrunk and the Navy's had increased. The latter fact, however, must be interpreted in the light of the arrangement under which vessels for both Army and Navy use in the Pacific Ocean Areas were allocated to the Navy. In other words, the shift of allocations from the Army to the Navy does not imply a corresponding change in the actual utilization of shipping.

Tankers are not included in Table 4. Bulk shipments of petroleum products to meet the Army's oversea requirements were transported by the Navy. On 1 July 1945, out of a total of 14,582,000 deadweight tons of ocean-going tank vessels in the service of the United States, 9,143,000 deadweight tons, or 62.7 percent, were owned or chartered by the Navy or were allocated to the Navy by the War Shipping Administration.[155]

Co-ordination of Port Utilization

During the first year of the war in Europe it was foreseen that the port facilities of the United States, while generally well developed and probably adequate for the national need if the United States should enter the war, would have to be conserved and utilized with care if their potential adequacy was to be realized.[156] The problem was twofold. First, there was the matter of preventing piers and warehouses, which were suitable for handling the export traffic flow, from being used for storage, repair work, or other nontransportation purposes. Second, there was the matter of distributing the traffic among as many ports as practicable so as to avoid some being neglected, with resulting diversion of their water-front facilities and longshore labor to other em-

[153] Rad, Marshall to MacArthur, CM–OUT 12523, 6 Jun 45; Rad, MacArthur to Marshall, CM–IN 11431, 12 Jun 45.

[154] Memo, Secy JCS for the chiefs individually, 22 Aug 45, listed the Navy proposal (JCS 1286/6) among items removed from JCS Agenda, files of Plans and Policy Group, P&O Div, GS USA, ABC 381 United Nations, 23 Jan 42, Sec 3–D.

[155] WSA Shipping Summary, September 1945, pp. 148, 154; Conv, author with Mar Com representative, 12 Nov 47, sub: Allocation of Tanker Tonnage, OCT HB Topic Mar Com Opns. Total figure for tankers does not include those lend-leased to other countries for their operation.

[156] The Atlantic ports were the chief concern at that time; the possibility of war in the Pacific was not so strongly felt.

ployment, while a few were being overburdened.

Early in 1941 concern over the prospect of deepwater steamship terminal facilities being improperly used was expressed by the Board of State Harbor Commissioners at San Francisco and the Traffic Advisory Committee of the Maritime Association of the Port of New York.[157] The latter organization referred to rumors that the Navy wanted to obtain exclusive occupancy of the Bayonne (N.J.) Terminal, which currently was being used for loading ships with explosives and was the most suitably located pier in the harbor for that purpose; it felt that the Navy's oversea traffic did not warrant its acquisition of the installation. Other piers in New York harbor, including the Army base in Brooklyn, were cited as not being used fully for loading and discharging steamships. Both organizations suggested that the Transportation Commissioner, Advisory Commission to the Council of National Defense, set up a plan of coordination and control. At about that time a representative of the Port of New York Authority visited the several interested agencies in Washington with a view to stimulating interest in this subject.[158] It was recognized that since the Army, the Navy, and other federal agencies were concerned, effective control could not be exercised by local committees or municipal authorities.

The Army, with its shipping operations rapidly expanding, was fully cognizant of this problem, and when opportunity afforded it registered opposition to proposals which it believed would result in the improper use of specific port facilities.[159] The Assistant Secretary of War and The Quartermaster General favored the early establishment of a central co-ordinating authority.[160] In April 1941 the Transportation Commissioner met with representatives of the interested government and private agencies for a discussion of the subject. It was proposed that he and the chairman of the Maritime Commission undertake to work out a solution, but nothing came of the proposal since neither had authority to take plenary action.[161] In June the Army was spurred to further efforts by information that the Navy had acquired the Bayonne terminal and that the facility soon would become unavailable for ships loading Army or lend-lease ammunition. The Army recommended to the Navy that thereafter each department, before taking final action in such a matter, obtain clearance through the Army and Navy Munitions Board. The Navy agreed, but appropriate directives were not issued at once.[162] This was done

[157] Ltr, Pres of Bd to QMG, 4 Feb 41, AG 612 (2-4-41) (1)Co-ordination of Port Facilities; Ltr, Chm of Com to Mgr Port Traf AAR Washington, 10 Feb 41, OCT HB Topic Port Co-ordination.

[158] Conv, Chm Trans Adv Group OQMG and Asst Gen Mgr PofNYA, 28 Feb 41, OCT HB Topic PofNYA.

[159] Memo, ACofS G-4 for TAG, 23 Jan 41, sub: Allocation to Navy of Piers 96 and 98 Philadelphia, G-4/29901-20; Memo, C of Trans Br G-4 for ACofS G-4, 17 Apr 41, sub: Lease of Hoboken Terminal, OCT HB Gross Day File; Memo, JB for JPC, 6 Mar 41, sub: Proposed Sale or Lease of Hoboken Terminal, and Rpt, JPC to JB, 31 Mar 41, JB 356 (Ser 679), OCT HB Topic NY (Port of) Hoboken Terminal.

[160] Memo, Dir Plng Br OASW for Trans Commissioner (Budd), 16 Oct 40, G-4/31852-1; Memo, QMG for ACofS G-4, 12 Mar 41, AG 612 (2-4-41) (1) Co-ordination of Port Facilities.

[161] Memo for record, Deputy Trans Com, 2 May 41, sub: Mtg of Port Com; Memo, Chm Trans Adv Group OQMG for C of Trans Div OQMG (Wardlow for Dillon), 8 Aug 41, sub: Co-ordination in Use of Port Facilities. Both in OCT HB Topic Port Co-ordination.

[162] Memo, C of Contributory Div OUSW for Exec Secy ANMB, 20 Aug 41; Ltr, Chm Mar Com to USW, 6 Oct 41; Ltr, USW to Chm Mar Com, 23 Oct 41. All in OCT HB Topic ANMB.

some months later, after the chairman of the Maritime Commission had urged that such a plan be placed in effect so that commercial interests as well as the armed services would be assured of proper consideration.

The Ocean Shipping Section of the Army and Navy Munitions Board, which was designated to deal with such matters, initially consisted of representatives of the Under Secretary of War, the Under Secretary of the Navy, and the chairman of the Maritime Commission. During the early months of the war a number of changes were made in the membership of the Section. The representative of the Maritime Commission became the representative of the newly created War Shipping Administration. A representative of the Chief of Transportation replaced the representative of the Under Secretary as the Army member. A representative of the Office of Defense Transportation was added.[163]

Soon after our entry into the war General Somervell, then G–4, instructed all elements of the Army that, in order to insure that port facilities were used for their primary purpose, the transshipment of personnel and supplies overseas, all requests for authority to acquire such facilities should be submitted to his office for staff action and clearance with the Munitions Board. After the creation of a Chief of Transportation the instructions were changed to provide that requests be filed with him.[164]

General Gross took a keen interest in the matter. During the early part of the emergency the Air Forces and the Corps of Engineers had acquired piers for the storage and assembling of their matériel. Gross believed that these piers should have been kept free for use as oversea shipping terminals, and he was anxious that additional piers should not be tied up in this manner.

During the spring of 1942 the Army complained that the representative of the War Shipping Administration on the Ocean Shipping Section was withholding approval of requests for facilities which were considered essential to the Army's oversea operations.[165] The explanation given for this withholding was that facilities once under the control of the Army or the Navy were used exclusively for their operations and no longer were available for handling lend-lease and commercial cargoes, for which WSA was responsible. WSA also complained that the Army had taken over water-front facilities without prior clearance by the Ocean Shipping Section, and the Army admitted that this was true of several terminals for which clearance had been requested but not obtained because of WSA opposition. Later, when better understanding and closer co-ordination had been worked out between the Army, the Navy, and WSA, agreement in regard to such matters was more readily achieved. In the spring of 1944 the Chief of Transportation took the position that further leasing of piers and transit sheds for the exclusive use of either service was not desirable, since by

[163] Ltr, USW to Chm Mar Com, 23 Oct 41; Memos, Secy ANMB for Divs of ANMB, 16 and 23 Apr 42. All in OCT HB Topic ANMB.

[164] Memo, ACofS G–4 for TAG, 29 Jan 42, G–4/33618–3; Memo, CG SOS for TAG, 21 Apr 42, AG 612 (1–7–42) (1) Clearance of Proposals for Taking Over Port Terminal Facilities.

[165] Memo within OCofEngrs (Meier for O'Brien), 7 May 42, OCT HB Topic ANMB; Memo, alternate Army member of OSS ANMB (McCoubrey) for CofS SOS, 12 May 42, OCT HB Topic ANMB; Memos, Opns Off OCT for CofT, 5 and 7 Jun 42; Ltr, Opns Off OCT to WSA, 8 Jun 42. Last two in OCT HB Wylie WSA. The WSA attitude was in harmony with its plan to relieve the Army of the loading of WSA vessels allocated to it, which will be discussed in the next chapter.

then both had increased their terminal facilities considerably and it had been established that commercial piers could be used for military shipments in emergencies.[166]

The matter of avoiding a concentration of export freight traffic at a few large ports required constant attention. It was natural that the Army should tend to utilize to capacity the ports where it already had well-equipped installations and experienced organizations, since that procedure was conducive to both efficiency and economy. The same argument applied to lend-lease and Navy supply operations. Nevertheless it was recognized that there was danger of overconcentration and that the use of all major ports would become a necessity as the war progressed. The Ocean Traffic Branch of the Chief of Transportation's Water Division kept the question of distributing the Army's cargo operations constantly alive.[167] General Gross registered strong opposition to a suggestion from G–4 that the New Orleans Port of Embarkation might be abandoned and its functions transferred to other ports.

In the spring of 1944, when the port situation was becoming acute, intensive study of the problem was undertaken by a number of agencies. The Stevedoring and Ship Facilities Branch of the Water Division prepared monthly estimates of the current and potential capacities of the ports for handling general cargo and ammunition, based on available facilities and labor supply.[168] The joint operations committee at San Francisco maintained a subcommittee to give this subject particular attention. A Port Utilization Committee, established in Washington under War Shipping Administration sponsorship and consisting of representatives of WSA, the Army, the Navy, and the Office of Defense Transportation, kept the situation on all seaboards under observation, making use of information submitted by joint committees at the ports and by numerous agencies in Washington.[169] The formation of this committee satisfied a request which ODT had made for participation with the other agencies in keeping the port situation under control—a participation to which ODT considered itself entitled in view of its responsibility for inland and coastwise transportation.[170] The Joint Military Transportation Committee delved into the problem from time to time.

The question of port capacity and utilization was a particularly vital one during the latter stages of the war in relation to the Pacific coast. There it was not alone a

[166] Memo, CofT for CG NYPE, 24 Apr 44, sub: Additional Pier Requisitions, OCT HB Wylie Staybacks; Comments of OCT on Report of Pacific Coast Coordinator of Naval Logistics, May 44, pp. 8, 10, OCT HB Topic Port Capacity and Utilization; 1st Ind, CofT for CG ASF, 23 Aug 44, OCT HB Wylie Port Capacity Studies.

[167] Memo, CofOTB for C of Water Div (Franklin), 27 Nov 42, OCT 563.5 (1942); Memo, CofOTB for ACofT for Opns, 22 Oct 43, sub: Projected Shipments through PE, OCT 563.5 (1943); Memo, ACofS G–4 for CG ASF, 3 Mar 44, sub: New Orleans Port of Embarkation; Memo, CofT for Gen Somervell, 20 Apr 44, sub: U.S. Port Capacities. Last two in OCT HB Wylie Port Capacity Studies.

[168] Random copies in OCT HB Topic Port Capacities and Utilization and in OCT HB Wylie Port Capacity Studies.

[169] WSA Adm Order 57, 16 Feb 44, OCT HB Topic Port Capacity and Utilization; Ltr, ACofT for CG SFPE, 26 Jul 44, sub: Assignment of Shipping, OCT 563.51 West Coast; 2d Mtg, Army-Navy Supply and Shipping Conf, 1–5 May 45, p. 10; two Ltrs, WSA member of Port Utilization Com to Army and Navy members, 7 Mar 45, OCT HB Topic Port Capacity and Utilization.

[170] Ltr, USW to ODT, 7 Nov 43; Ltr, ODT to USW, USN, WSA jointly, 24 Mar 44; Ltr, USW to ODT, 29 Mar 44. All in OCT HB Topic Port Capacity and Utilization.

question of piers and warehouses. The ability of the railroads to move the vast quantities of supplies required for the war against Japan into and through the ports was a matter of concern, despite the measures taken by the railroads and the Army to increase facilities. Labor supply also was a factor which demanded constant consideration, but the Army had anticipated this problem and was prepared to use Transportation Corps port companies to supplement civilian labor to the extent necessary.[171]

The Chief of Transportation had accepted the conclusion that a portion of the military freight destined to the Pacific would have to be loaded at Gulf and Atlantic ports, but he planned to use eastern ports only to the extent necessary after west coast ports had been used to capacity. In preparing advance loading plans to this end he came into conflict with the War Shipping Administration, which apparently had a lower estimate of west coast capability than that which the Transportation Corps had worked out and which favored more east coast loadings because the ships were becoming available there in greater numbers.[172] In General Gross's office it was felt that the WSA view with regard to Pacific coast loading was colored by the constant threat of congestion at San Francisco and that the San Francisco situation was due, in part at least, to failure of the joint committee at that port to plan for loading more ships at Los Angeles and Seattle sufficiently in advance of the loading dates to enable the Army and the Navy to divert the required quantities of cargo into those ports.

The west coast port situation was rendered more difficult by the growing quantity of lend-lease freight shipped across the Pacific to the USSR. That service employed Soviet vessels and Liberty ships which had been transferred to the Soviet flag under lend-lease arrangements. In view of the heavy Army and Navy operations at San Francisco, the joint committee for operations endeavored to confine the Soviet traffic as much as possible to the northwest ports.[173] Portland, Oreg., was the principal loading point for ships in that service, which utilized the facilities of the Army subport of embarkation. The Army and the Navy moved relatively little traffic through Portland, in accordance with a directive of the Joint Chiefs of Staff that Soviet vessels be given preferential use of that port.[174] When the USSR representatives complained to the President's Soviet Protocol Committee regarding the slowness of the loading operation at Portland, the Army pointed out that the irregularity of the sailings had caused much longshore labor to drift away but that the larger part of the available labor was being employed in loading Soviet vessels. It indicated also that a contributing factor in the delay was the failure of the local Soviet agent to decide sufficiently in advance what cargo was to be loaded on specific ships.

In addition to the above-mentioned problems of properly utilizing port facilities and

[171] OCT Comments on Report of Pacific Coast Coordinator of Naval Logistics, May 44, pp. 14, 17, 18, OCT HB Topic Port Capacity and Utilization.

[172] Memo, C of Plng Div OCT for ACofT for Opns (Wylie), 20 May 45, sub: West Coast Shipping Position; Memo for record by ACofT for Opns, 27 May 45. Both in OCT HB Topic Port Capacity and Utilization.

[173] JMTC 38th Mtg, 30 Apr 43, Item 1; JMTC 39th Mtg, 31 May 43, Item 4.

[174] Ltr, ACofT for Acting Exec, the President's Soviet Protocol Committee, 5 Jul 44, AG 563.5 West Coast. Brig Gen R. H. Wylie, ACofT, represented the CofT on this committee, which was concerned with supplying and moving matériel to USSR in accordance with the President's commitments.

avoiding the overconcentration of traffic, there were the problems of keeping the rate of freight movement to the seaboard commensurate with the capacity of the ships available, and preventing the accumulation of unnecessarily large "banks" of supplies at the ports as insurance against possible shortages of cargo. The Army, the Navy, the War Shipping Administration, and the Office of Defense Transportation, as well as the British Ministry of War Transport, were represented on the Transportation Control Committee, which was established in Washington in March 1942 and charged with the responsibility of keeping the ports fluid. The results were very satisfactory. A detailed discussion of the methods and accomplishments of that committee will be presented in another volume of this history.

While much was accomplished in the direction of improved port utilization through the co-operative efforts of the Army, the Navy, and the civilian agencies concerned with transportation, much more could have been accomplished by the actual consolidation of the port operations of the armed services. This point was developed in a detailed study prepared in the War Department soon after the termination of hostilities.[175] The Army and the Navy maintained separate establishments at most of the larger ports for the transshipment of personnel and supplies and the performance of related functions. The elimination of this duplication, the study pointed out, would have reduced the total demand for piers, warehouses, administrative personnel, and longshore labor and at the same time would have lightened the problem of co-ordination in the over-all utilization of the ports and their facilities. As will be more fully explained in the next chapter, the efforts for consolidation which were made during the war were without avail. The question of joint port operation was closely tied in with the question of joint vessel operation, and neither the Army nor the Navy was willing to accept the proposals made by the other to achieve that end.

Co-ordination of Ship Repair and Conversion

The demand for ship repairs and alterations at American yards expanded tremendously as the war progressed, and although the facilities were expanded there was always a backlog of work on urgently needed vessels. This was a natural consequence of the increase in the number of merchant and naval vessels in service and the unusual hazards of wartime operation, but there were other contributing causes. The Army and the Navy required many special types of vessels—combat loaders, hospital ships, repair ships, airplane and tank transports, animal transports, to mention a few—which to a considerable extent were provided by altering existing bottoms. The heavy demand for troop transportation necessitated the conversion of many freight vessels to fit them for that purpose. Ships hastily built under war conditions were more likely to develop machinery trouble and structural weakness than were those constructed under the more favorable conditions of peacetime. Recently recruited crews were less adept than experienced seamen at preventive maintenance and the performance of small repair jobs in time to stop them from becoming big ones. Repair facilities in many theaters of operation were wholly inade-

[175] Memo prepared in OCT, 27 Nov 45, sub: Sec IV—Trans (Surface) Port Operation, OCT HB Topic Port Co-ordination; Report to the Secretary of War on Common Activities of the Army and Navy, 12 Dec 45, pp. 62–64, AG A49–212, RG 114.

quate and were susceptible of only limited enlargement; therefore much repair work needed while the ships were overseas was deferred until the vessels returned to United States ports. American yards were called upon to repair, convert, and arm many foreign flag vessels, including those requisitioned by the United States and those operating in the American and British pools.[176]

The pressure upon the repair yards was heavy and unremitting. Getting vessels in serviceable condition so that they might sail with the convoys to which they were assigned was a matter of utmost importance. One large concern which had yards on both Atlantic and Pacific coasts reported that its wartime activities had included the performance of 37,778 repair jobs on merchant and naval vessels; another concern reported that it had performed more than 20,000 repair and conversion jobs.[177] The War Shipping Administration, which in May 1942 took over from the Maritime Commission responsibility for supervising repairs on government-owned merchant vessels and on foreign vessels under lend-lease arrangements, handled 42,076 jobs, of which 36,476 were on ships under the American flag and 5,600 on ships under foreign flags; about 100 repair yards throughout the United States were utilized for this work, and in addition about 230 other concerns performed specialized types of work in connection with maintenance, repairs, and conversions.[178] Ship repair work was in direct competition for facilities, materials, and labor with the shipbuilding program, and sometimes suffered by reason of the higher priority given to the construction of new vessels.

In June 1941, in an effort to bring better order to the private ship repair industry and eliminate bottlenecks, the Maritime Commission established a Coordinator of Ship Repair and Conversion, with headquarters at New York.[179] The Navy, which relied upon private yards for a considerable amount of repair work, participated in the plan from the beginning, and the Army soon became a party to it. When a ship needing repair entered an American harbor the owner or operator, instead of placing an order with a yard of his own choice, filed with the co-ordinator an application for the use of repair facilities. The co-ordinator, who maintained complete information regarding the facilities, materials, and labor available at each repair yard, as well as the status of the work already in hand, indicated where the order should be placed so that the work might receive the promptest and most efficient attention. Participation of the Army and the Navy in this plan was voluntary, but private owners and operators of merchant vessels were required by WSA to obtain advance approval of the co-ordinator before contracting for work at waterside repair facilities. When the work did not involve waterside facilities, advance approval of the co-ordinator was not necessary, but it was required that he be notified regarding the work and its probable duration within five days after the contract had been placed. All ship repair concerns were

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[176] *Mar Com Rpt* for the period ending 30 Jun 42, pp. 58, 59.

[177] "Shipyards Reveal Feats in Wartime," *The New York Times*, February 10, 1946; "Todd Yards Sped 21,000 Ships to War," *The New York Times*, February 24, 1946.

[178] Report of the War Shipping Administrator to the President, *The United States Merchant Marine at War* (Washington, January 15, 1946), pp. 48–50.

[179] "U.S. Coordinates All Ship Repairs," *The New York Times*, June 27, 1941; Memo for record by Wardlow, 31 Mar 43, sub: Co-ordinator of Ship Repairs; WSA GO 36, 5 Aug 43. Last two in OCT HB Topic Mar Com Ship Repairs.

required to report to the co-ordinator weekly regarding work performed on a subcontract basis. The co-ordinator established branch offices on the Pacific coast and the Gulf to aid in the performance of his functions in those areas.

The Army, the Navy, and the War Shipping Administration also joined efforts in developing a form of repair contract which would enable them to eliminate the usual delays in getting work started and at the same time protect the government's financial interest. In peacetime the Army had let contracts for repair work on a fixed price basis.[180] That method presupposed adequate time for making surveys, writing specifications, and obtaining competitive bids. During the war, despite the necessity of getting repair work started with the least possible delay, the preparation of specifications and cost estimates could not keep up with the demand because competent personnel were not available in sufficent number. Moreover, since the yards were overcrowded with work, competitive bidding lost much of its effectiveness in keeping down charges.

As a result of the joint efforts of the three agencies and with the aid of suggestions from the Comptroller General, a master ship repair contract was drawn up, which became effective 1 July 1943.[181] Under the new procedure, as soon as a repair yard had been designated by the co-ordinator, a representative of the yard and a government contracting officer inspected the vessel and prepared a job order for each item of repair. The order when executed by both parties was the contractor's authority to proceed with the work. The charges which he eventually submitted were based on an hourly average rate for all classes of direct labor negotiated on the basis of the contractor's recent experience, plus the cost of materials, facilities, and subcontracts and a reasonable percentage for profit. The contractor's accounts were open to government inspection and his charges were subject to revision when the profit on a job was found to be excessive. The principal fault found with the master ship repair contract was that it removed the incentive which the contractor had under a fixed price arrangement to obtain maximum output from his labor force, but the Army believed that this disadvantage was more than offset by beneficial features, particularly the acceleration of the work.[182]

The ship repair situation was especially critical on the Pacific coast, primarily because a large part of the naval fleet was assigned to the Pacific and repair facilities at advance bases were either nonexistent or very inadequate. Collaboration in regard to ship repairs had been carried on between local representatives of the Army, the Navy, and the War Shipping Administration prior to the adoption of the Basic Logistical Plan by the armed services in March 1943, and thereafter it took on a more definite form. The Pacific Coast Joint Committee for Shipbuilding and Ship Repair which was then established included the commandant of the Twelfth Naval District (later the Pacific Coast Coordinator of Naval Logistics), the Commander, San Francisco Port of Embarkation, and the Pacific coast repre-

[180] Memo, SFPE for QMG, 18 Jul 41; Memo, QMG for SFPE, 20 Aug 41. Both in OCT 574 Army Transports.

[181] Memo, Hist Rec of Army War Ship Repair Contract Agency, 30 Jun 44; Memo, sub: Explanation of Background and Opns of Master Ship Repair Contract; WD Contract Form TC 103 Ship Repair. All in OCT HB Water Div Ship Repair and Conv.

[182] See Ltr, 2d ZTO to Exec OCT, 4 Apr 44, OCT HB Water Div Ship Repair and Conv.

sentatives of the War Shipping Administration, the Maritime Commission, and the Coordinator of Ship Repair and Conversion. Its basic function was to allocate ships to private yards in accordance with the availability of facilities and labor and to determine priorities. The authority of the committee took precedence over that of the co-ordinator.[183] This main committee, which was located at San Francisco, was aided by subcommittees at Los Angeles, Seattle, and Portland.[184] Notwithstanding the good work done by these joint organizations and the tapering off of shipbuilding activity in 1945, the west coast ship repair situation remained critical to the end of the war.[185]

Ordinarily a foreign government desiring to have its ships repaired in American yards submitted a request to the Foreign Economic Administration (Lend-Lease Administration). After determining that funds were available for the purpose, FEA forwarded the request to the War Shipping Administration, which decided whether the work could be undertaken in view of the situation at the yards.[186] Early in 1944, in connection with the proposed conversion of three British transports and five British armed merchant cruisers, this procedure broke down because the U.S. Navy objected to placing the additional burden on American repair facilities. The Army recognized that there had not been wholly satisfactory co-ordination in this field on the east coast but believed that the work in question could be undertaken without prejudice to Navy repairs.[187] The Army Chief of Transportation contended that in view of the great need for troop lift the basic question was whether the conversion of these vessels would require more or less time and expense than would be needed to provide equal troop lift by converting new vessels.[188] The Joint Military Transportation Committee, to which the matter was referred, recommended that the three transports be converted and that the armored merchant cruisers be surveyed by a joint committee to determine whether and to what extent conversion was warranted.

Differences of opinion resulting from these surveys and consequent delays in disposing of the question led to the establishment of a high-level Joint Ship Repair and Conversion Policy Board, consisting of the Director of War Mobilization, who acted as chairman, the War Shipping Administrator, the Vice Chief of Naval Operations, and the Commanding General, Army Service Forces.[189] This board was assisted by a working committee composed of representatives of the member agencies, with the Co-

[183] Joint Memo, CNO, CG ASF, Administrator WSA, and Chm Mar Com for Pacific Coast Coordinator of Naval Logistics, etc., 12 Feb 44, sub: Pacific Coast Joint Committee for Shipbuilding and Repair, OCT 334 Pacific Coast Joint Committee.

[184] Memo, CG SFPE for CofT, 8 Oct 45, OCT HB Topic Port Co-ordination.

[185] "Shipbuilding Yard Layoffs to be Absorbed by Repair Unit," *The Washington Post*, February 7, 1945; "Navy Wants 15,000 to Repair Vessels Damaged in Pacific," *The New York Times*, May 31, 1945; Memo, Comdr WSF for SN, 7 Jun 45, sub: Ship Overhaul Load—West Coast, OCT HB Topic Navy; co-ordinator's list of ships under repair or conversion on Pacific coast, 19 Jul 45, OCT 564.

[186] Memo, Secy JCS for Maj Chapman, 2 Mar 44, sub: Refitting and Conv of British Ships, CCS 564 (1-14-44).

[187] Memo, COMINCH for CofS USA, 31 Jan 44; Memo, CG ASF for CofS USA, 1 Feb 44; Memo, CofS USA for COMINCH, 3 Feb 44. All in OCT 564 British Vessels.

[188] CMTC 79th Mtg, 14 Jan 44, Item 3; JMTC 59th Mtg, 11 Feb 44; JCS 709, 14 Feb 44.

[189] JCS 709/1, 16 Feb 44; JCS 709/5, 6 Mar 44; JCS 709/6, 8 Mar 44; Memo, Dir of War Mob for CofS USA, CNO USN, and WSA, 25 Feb 44, OCT HB Exec Relations with OWM.

ordinator of Ship Repair and Conversion acting in an advisory capacity.

The close co-operation of the Army, the Navy, and the War Shipping Administration in regard to ship repairs extended overseas. In view of the large number of merchant vessels operating under WSA control and the congestion at domestic yards, the representatives of that agency at foreign ports did what they could to assure that ships which had been damaged on the outbound voyage or while abroad should obtain needed repairs before they returned to the United States. Stocks of materials and spare parts were assembled at the oversea ports, sometimes being salvaged from ships which had been damaged to the point where it was uneconomical to restore them to service.[190] Such materials were available for the repair of transports operated by the Army and the Navy. Navy dry docks and machine shops overseas were utilized on occasion for repairing merchant vessels. The Army converted and equipped a number of marine repair ships which were sent to oversea ports where shore facilities were inadequate or entirely lacking.

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[190] "WSA Describes Foreign Repair Problems," *Journal of Commerce* (New York), December 26, 1944.

CHAPTER VI

Relations with Other Ship-Operating Agencies

A large percentage of the vessels utilized by the Army were operated by or under the control of other agencies. On 31 July 1945, for example, out of a total of 1,706 ocean-going vessels in the service of the Army, only 186 were operated by the Army.[1] The remainder were operated by agents of the War Shipping Administration or by the U.S. Navy or were included in the pool of foreign vessels controlled by the British Ministry of War Transport. The maintenance of smooth working relations with these agencies was therefore an important aspect of the Army's transportation task.

The total of 1,706 vessels in Army service at the end of July 1945 embraced all vessels of 1,000 gross tons or over which were carrying Army personnel to at least 50 percent of their passenger capacity, or were carrying at least 5,000 measurement tons of Army cargo.[2] This total included 261 vessels which were classified as troopships because they had permanent accommodations for 500 or more troops, and 1,445 which were classified as cargo ships although some of them carried limited numbers of troops. This fleet provided 620,355 permanent troop spaces and had a total cargo capacity of 16,192,700 measurement tons. Seventeen of the troopships and 78 of the cargo ships were under foreign registry.[3]

Relations with the War Shipping Administration

The Army was dependent on the War Shipping Administration for vessels to carry the bulk of its oversea traffic, and during the winter of 1945 it was using almost 50 percent of the dry cargo and passenger shipping controlled by that agency.[4] While a limited number of vessels was made available to the Army by WSA under various forms of charter or on permanent allocation, most of them were allocated for the voyage only and therefore were subject to reallocation when they returned to the United States. The WSA pool of cargo vessels had to meet demands from other sources, and in view of the almost continu-

[1] AG 560 (3 Aug 45), 13 Aug 45, sub: Monthly List of U.S. Army Transports.

[2] ASF MPR, Sec. 3, 31 Jul 45, p. 66. Total of 1,706 vessels in Army service was peak or near peak for war period. ASF Statistical Summary, World War II, p. 145, shows 1,765 vessels in Army service in December 1944. Due to new and more restrictive method of counting adopted early in 1945, it is doubtful whether figures are strictly comparable. For new basis of counting see Memo, Water Div for Contr Div OCT, 28 Mar 45, OCT HB Water Div Misc.

[3] Statistical table, Water Div, Vessels in Army Service, 31 Jul 45, OCT HB Water Div Vessel Opns Analysis.

[4] Ltr, SW to Chm House Com on Merchant Marine and Fisheries, 6 Mar 45, OCT HB Water Div Postwar Fleet; WSA Shipping Summary, Sep 45, p. 38.

ous over-all shortage of shipping the question of priorities frequently was an acute one. Naturally there were many problems of policy and procedure to be worked out between the Chief of Transportation and WSA, in order that the Army might receive the numbers and types of vessels which it required at the places where they were needed.

The Army had concurred in the establishment of an agency to control the employment of U.S. shipping, but it had not visualized such broad authority in the hands of a civilian official as was given to the War Shipping Administrator. Military leaders recognized that an agency of this type was necessary to insure that American vessels were operated in the national interest and to facilitate collaboration with the British Ministry of War Transport in the effective utilization of all vessels under Allied control. But the Army officers most directly concerned believed that since military victory was the objective and shipping was essential to that victory, the military authorities should have the deciding voice in determining what portion of the merchant marine was to be assigned to military uses. Other agencies and individuals had different views, however, and the end product varied considerably from the Army's conception.

An understanding of the circumstances under which the War Shipping Administration was created is aided by taking a quick look at the British Ministry of War Transport. During the early part of the war in Europe the control of British transportation was divided between two agencies; the Ministry of Transport, which had existed in peacetime, was responsible for inland transportation, and the Ministry of Shipping, which was established in September 1939, was responsible for ocean transportation. In May 1941 these hitherto independent agencies were combined to form the Ministry of War Transport in an effort to achieve closer co-ordination between the inland carriers, the ports, and the steamship lines, and more efficient utilization of all.[5] The Minister of War Transport, Lord Leathers, was responsible directly to the Prime Minister, and the means under his control had to be employed in the manner that would best meet both civilian and military requirements.

Immediately after our entry into the war the President established the Office of Defense Transportation, with authority over the rail, motor, and inland waterway carriers, and in so doing departed from the British example of a single transportation agency. In creating the War Shipping Administration some weeks later the Chief Executive followed the British example of vesting a broad control over shipping in a civilian agency. In practice, however, WSA did not exercise as complete control over port operations and the loading of ships as did BMWT—a matter which will be presented more fully hereafter.[6]

When it became apparent that the Strategic Shipping Board, which President Roosevelt had established immediately after our entry into the war, would not be able to solve the problem of shipping allocations by agreement among the three agencies represented in its membership—the Maritime Commission, the Navy, and the Army—a number of alternatives were put forward. A plan which originated in the Navy pro-

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[5] See Hancock and Gowing, *British War Economy*, X, 120–35.

[6] Keen interest of BMWT in establishment of corresponding U.S. agency is disclosed in State Dept Msg 744 from Amb John G. Winant (Harriman for Land and Hopkins), 17 Feb 42, paraphrase in OCT 540 Gen.

posed the establishment of a shipping coordinator with cabinet rank. That plan was not acceptable to the Army, which objected to placing the Army-owned transports and the Army ports of embarkation under the absolute control of such an official.[7] The Army proposed instead that a "central shipping administration" be established, with the chairman of the Maritime Commission as administrator, to function under the general supervision of a board consisting of the administrator and representatives of the Army, the Navy, and the Office of Production Management; that all transoceanic vessels, except those of the armed services, be pooled "under the exclusive direction" of the new agency; and that the central shipping administration "be guided by the decisions of the Army-Navy Joint Board with respect to the movement of troops and supplies for the Army and the Navy and in the allocation of the necessary shipping to initiate and maintain such military and naval operations as may be adopted." [8]

An informal expression of opinion by a representative of the Maritime Commission indicated that that office was favorably disposed toward the latter arrangement and also that it was willing to undertake the manning and operation of the vessels necessary to carry the troops and supplies of the Army, if called on to do so.[9] The Army and the Navy then agreed on a plan conforming to the Army's contention that ship allocations should be in accordance with joint decisions of the armed services, and they submitted a draft of an executive order embodying that idea.[10] Rear Adm. Emory S. Land, who was chairman of the Maritime Commission and slated to head the new agency also, objected to this subordination of his authority, and Mr. Harry Hopkins likewise opposed it on the ground that lend-lease might not receive sufficient consideration. The President supported these views and accordingly the final draft of the executive order, which was prepared in the Bureau of the Budget, gave the War Shipping Administrator sole direction of the new agency and made him directly responsible to the President.[11]

The War Shipping Administrator's duties included control of the "operation, purchase, charter, requisition, and use" of all ocean-going vessels under the flag or control of the United States, except combatant vessels of the Army, the Navy, and the Coast Guard, fleet auxiliaries of the Navy, transports owned by the Army and the Navy, and coastwise vessels controlled by the Office of Defense Transportation. He was charged with the allocation of vessels under his control for use by the Army, the Navy, other federal departments and agencies, and the governments of the United Nations. He was directed to "comply with strategic military requirements" in allocating vessels, to collaborate with existing military, naval, and civil departments and agencies of the government in order to secure the most effective utilization of shipping in the prosecution of the war, and to be guided by schedules transmitted to him by the chairman of the

[7] Memo, ACofS G-4 for CofS USA, 28 Dec 41, sub: Admiral Turner's Proposed JB Action, G-4/33920.

[8] Ltr, ACofS G-4 for Harry Hopkins, 31 Dec 41, inclosing draft of EO; Memo, CofS USA for Admiral Stark USN, 31 Dec 41, sub: EO Establishing Central Shipping Adm. Both in ASF Hq Shipping 1942-43.

[9] Memo, C of Trans Br G-4 for ACofS G-4, 1 Jan 42, sub: Opn of Water Trans, Trans Br G-4/560 Mar Com.

[10] Bureau of the Budget, *The United States at War*, pp. 149-50.

[11] EO 9054, 7 Feb 42.

War Production Board prescribing the priorities of movement of cargoes essential to the war production effort and the civilian economy. Broadly speaking, the plan contemplated that WSA would concern itself with the utilization of vessels in service, while the Maritime Commission would devote its main effort to the construction of new tonnage.[12]

The War Shipping Administrator considered it essential that the operating relationships of his office with the transportation offices of the Army and the Navy, under the general terms of the executive order, should be defined in some detail. To that end he first worked out an understanding with the Navy and then approached the Army on the subject.[13] After about a month of negotiation, agreement was reached and a memorandum on interdepartmental relationship was signed on 13 June 1942 by General Somervell on behalf of the Army and by Mr. Lewis W. Douglas, the Deputy Administrator, on behalf of WSA.[14]

The memorandum provided that the Army would operate its owned vessels, keeping the War Shipping Administration informed regarding their employment and making them available to WSA on the homeward voyage when military requirements permitted. WSA troopships assigned to the Army were to be handled through existing operating organizations (WSA agents) in accordance with existing charters, and their homeward employment was to be determined by WSA subject to the requirements of the Army's troop movement schedule. WSA freighters were to be assigned on a voyage basis; they were to be loaded outbound by the Army and revert to WSA upon completion of discharge at oversea ports. The memorandum provided that additional piers and terminals might be placed under the control of the Army when necessary to carry out strategic movements; that Army terminals would be made available to WSA, and WSA terminals to the Army, when not needed by the controlling agency; that when commercial terminal facilities were taken over by the Army it would, insofar as practicable, continue to use the same contracting stevedores and terminal operating personnel; and that the Army and WSA would confer regarding the purpose and the terms of occupancy in connection with the acquisition of piers and terminals by the Army. The memorandum further provided that except in emergencies WSA would be the sole contracting agent of the Army for the purchase, charter, or requisition of ocean-going vessels; that Army and WSA representatives in Washington and at the ports would maintain close liaison in an effort to interchange cargo and obtain "full and down" loadings; and that the conversion and alteration of ships to fit them for Army use would be accomplished by WSA, or the Army, or by the two agencies jointly, as might be arranged. In the last paragraph of the agreement each party foreswore any "intention or ambition" to absorb the functions of the other "by use of its requisition powers or otherwise."

This memorandum, together with some amplifications which were agreed on later,

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[12] This intent was clarified by EO 9244, 16 Sep 42, which expressly transferred certain functions from Mar Com to WSA.

[13] Ltr, WSA to SW, 15 May 42, OCT HB Wylie WSA.

[14] Memorandum Covering the Interdepartmental Relationship Between the Army and the War Shipping Administration to Form a Basis for Full and Complete Cooperation in Connection with the Purchase, Charter, Use and Operation of Vessels and Terminal Facilities, transmitted with Ltr, Douglas to Somervell, 13 Jun 42, OCT HB Wylie WSA.

754-915 O-64—14

served as a guide in the successful operating relationships of the Army and the War Shipping Administration. It did not forestall, however, a heated controversy on a question which both sides considered of importance in its bearing on the performance of their responsibilities. The question related to the loading of the large fleet of cargo vessels which WSA allocated to the Army. The Army had handled the loading of such vessels prior to the creation of WSA, and when the executive order establishing that agency was being formulated Colonel Gross suggested that the point be covered expressly. His suggestion was not followed, and Gross indicated later that he had not pressed the matter because he had been informed by a representative of the Maritime Commission that no change in the Army's authority in regard to loading ships was intended.[15] The Army continued to load allocated vessels at its own terminals, but while the above-mentioned agreement on interdepartmental relationship was being formulated Gross learned that WSA was endeavoring to have this function transferred to its own agents who operated the vessels. On 10 June 1942 the issue was placed before WSA in a frank communication from General Somervell to Mr. Douglas.[16] Somervell remonstrated strongly against the attempt to "usurp" what he considered the proper functions of the Army and the Navy. He said that the Army's methods of handling oversea movements and loading ships were the result of experience during and since the last war and that no other interests could be permitted to interfere with the war effort. When approved a few days later the memorandum on interdepartmental relationship included a clause which provided: "All freighters assigned to the Army shall be loaded by the Army Transport Service."

The issue remained in the background for a period of about six months and then suddenly came to the fore again when a memorandum was received by the Secretary of War from the War Shipping Administration, transmitting a copy of a Presidential directive dated 18 December 1942, which dealt expressly with the subject.[17] The directive, which was addressed to the Administrator, provided that WSA should handle the loading of all allocated vessels except those required for special task forces or assault forces, and fleet auxiliaries. This meant that the large fleet of allocated vessels which handled regular movements of military cargo to the theaters would be loaded at commercial piers by WSA agents. Secretary of War Henry L. Stimson, in acnowledging the memorandum to the Administrator, said he understood that the directive had been initiated by WSA.[18] He expressed surprise that a matter which so obviously affected the interests of the Army should have been advanced without any one in authority in the War Department having had an opportunity to state his views to the Bureau of the Budget or to the President.

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[15] Pencil Memo, Gross for Somervell, pars. 5 and 6, 4 Jan 43, sub: Intent of EO of Feb 9 (7), 1942, ASF Hq Shipping 1942–43.

[16] Memos, Opns Off OCT (Wylie) for CofT, 5 and 7 Jun 42, sub: Contl of Ship Opn and Pier Facilities, OCT HB Wylie WSA; Memos, Gross for Somervell, 9 and 10 Jun 42, OCT 563.5 Gen; Memo, Somervell for Douglas, 10 Jun 42, ASF Hq Shipping 1942–43. The WSA position had been foreshadowed in Ltr, Land to Somervell, 4 Mar 42, par. 5, OCT HB Gross Day File.

[17] Ltr, WSA to SW, 18 Dec 42; Memo, the President for Admiral Land, 18 Dec 42. Both in OCT HB Exec Relationships with WSA.

[18] Ltr, 23 Dec 42, ASF Hq Shipping 1942–43.

Several weeks prior to the signing of the Presidential directive, the Army, as the next section of this chapter will show, had proposed to the Navy the establishment of a joint transportation service and the placing of the War Shipping Administration vessels used by that service under naval operation. Whether the WSA action to gain control of the loading of such vessels was in the nature of a countermeasure is not apparent from the documents reviewed.

Since the Army and the Navy were affected similarly by the new directive, the matter was placed before the Joint Chiefs of Staff. That body promptly arranged a meeting with the War Shipping Administrator and his deputy, in order that the intent of the directive and its effect on the armed services might be determined.[19] The Deputy Administrator, Mr. Douglas, who presented the WSA position, asserted that there no longer was a reservoir of shipping and that the shortage of vessels could be lessened by improving the operation of those available. He pointed out that the most economical use of ship space could be attained only by a proper mixture of weight and measurement cargo (that is, a mixture of lend-lease and military cargoes, since the former was relatively compact and heavy and the latter was relatively bulky and light). He referred to the separate operations of the Army and the Navy in the Pacific, which he felt had not given the best possible utilization of ships and ship space. Mr. Douglas conceded that there were types of loading in connection with task forces which the armed services could handle best and disclaimed any intention of interfering with them. With regard to the large number of vessels which WSA allocated to the Army for the movement of maintenance supplies, he indicated that if WSA had "control" of the loading so as to insure economical utilization it would not attempt to take over the actual physical loading. He felt that in the past full co-operation had not been given by the armed services in the effort of WSA to avoid wasted cargo capacity. He agreed that it might have been better if the armed services had been consulted before the directive was issued, but he did not consider that procedure necessary since WSA derived its authority directly from the President.

At this meeting, and in connection with a memorandum prepared in the Joint Chiefs of Staff for the President but not officially delivered, the views of the Army and the Navy with regard to the effect of the directive were presented at length.[20] It was pointed out that the ship-loading operation was a link in the chain of military supply and that military control and coordination throughout the chain were necessary. Full utilization of cargo space was an ideal to be sought, but it had to be sacrificed at times in order to get supplies to the theaters in the most expeditious manner. Sometimes it was difficult to differentiate between supplies for task forces and so-called maintenance supplies. The loading of military cargoes by commercial operators would endanger the security of ship movements. Military ports of embarkation were set up to meet rapidly changing priorities and modifications in requisitions from oversea commanders, which commercial terminal operators were not prepared to do.

[19] Minutes, Mtg in Admiral Leahy's office, 28 Dec 42, OCT HB Exec Relationships with WSA.

[20] Incl A to proposed memo for the President, 26 Dec 42, circulated by Secy JCS, OCT HB Exec Relationships with WSA.

Military ports of embarkation had adequate storage facilities to hold in reserve sufficient quantities of a great variety of supplies to meet emergency requests from the theaters, which commercial terminal operators did not have. Military ports of embarkation were called on to distribute certain shipments over several vessels to minimize the danger of complete loss and to "marry up" related items which arrived at the ports separately for movement in the same ship, and such processes required a technical knowledge not possessed by civilian operators. The pooling of military and lend-lease cargoes at the loading ports would handicap oversea commanders in diverting the ships to whichever discharge ports might best meet the military need of the moment. In the Army-Navy protest against the directive of 18 December it was asserted that their recent agreement for joint loadings in the Pacific would be impeded in its operation if the approval of schedules by a third party were required.

On 31 December 1942 Mr. Douglas presented to Admiral William D. Leahy, on behalf of the War Shipping Administration, a plan under which allocated ships would be loaded in accordance with a "mutually satisfactory program" and military technicians would be on hand to give advice whenever military cargo was being loaded by WSA operators.[21] Although Admiral Leahy thought the proposal went far toward resolving the difficulty, General Gross commented that it was based on a complete acceptance of the WSA interpretation of the executive order of 7 February 1942 and expressed the view that "there cannot be divided responsibility for the success of the military effort." [22]

A few days later, in a personal letter to Mr. Douglas, General Marshall referred to a "serious" and, he thought, "profitable" conversation at luncheon; stated that the Army's purpose in supporting the creation of WSA was to make available the maximum number of ships in a pool for allocation to the various uses; asserted that the Army had understood at that time that there was no intent to change the then effective practice of loading ships; remarked that he had made special inquiry regarding the shipping personnel utilized by the armed services and had found an "impressive list" of men drawn from civil life, who could scarcely have lost their judgment and skill through donning a uniform; and commented that the method of procedure adopted by WSA in this affair "was bound to cause grave difficulties, animosities and delays." [23] On the same day Secretary Stimson advised Admiral Land that the matter was under discussion with the President.[24]

The President's directive of 18 December was not rescinded, but it was not enforced by the War Shipping Administrator. The apparent purpose of WSA to exercise a supervision over the loading of military cargoes on WSA vessels similar to that exercised by the British Minister of War

[21] Memo, Admiral Leahy for General Marshall and Admiral King, quoted in JCS 173/3, 1 Jan 43.

[22] Memo, for Somervell, 2 Jan 43, sub: Comment on Douglas Memo, OCT HB Exec Relationships with WSA; Ltr, WSA to Admiral Leahy, 5 Jan 43, OCS 570, 1943.

[23] Ltr, 8 Jan 43, AG 334.8 WSA. First draft of this letter stated that while the Army had understood that the word "operation" in the EO of 7 Feb 42 had given WSA the manning, fueling, victualing, repairing, and navigating of the ships under its control, the Army had never considered that operation included loading.

[24] Ltr, 8 Jan 43 OCT HB Gross Day File.

Transport was not realized. The Army ports of embarkation continued throughout the war to load such vessels at their own piers. As the burden on Army facilities became heavier, increased use was made of piers operated by WSA agents, but the number of vessels loaded in this manner was a small percentage of the total.

In the spring of 1943 Army shipping operations, along with those of the Navy, were attacked from another quarter and on a broader basis. The CIO maritime unions, charging inefficiency in the handling of American cargoes, proposed that all operations, including warehousing, terminal management, and stevedoring, be centralized under the War Shipping Administration and that the formulation and administration of policies governing those activities be vested in tripartite bodies representing labor, management, and government. In rejecting the proposal as "wholly unwise," WSA cited, among various considerations, the long-established transportation services and large marine organizations of the Army and the Navy, the abandonment of which in the midst of war would create greater problems than already existed.[25] The Senate Special Committee Investigating the National Defense Program (Truman Committee), while recognizing that there were inefficiencies in the wartime use of shipping, substantially supported the WSA position.[26]

A recommendation that all cargo shipping and terminal operations be placed under the control of the War Shipping Administration was made by the Subcommittee on War Mobilization of the Senate Committee on Military Affairs in October 1943.[27] That subcommittee cited the operations of the British Ministry of War Transport as an example of the efficiency which could be achieved by placing both military and civilian shipping under one agency. Again the War Department defended its method of handling cargo movements, presenting much the same arguments as those stated above.[28] The War Department also opposed a recommendation of the subcommittee that a new group be established, consisting of representatives of the several interested government agencies, to plan ship allocations; it considered such a group unnecessary since the existing allocation system, in which the Joint Military Transportation Committee and WSA co-operated, was "completely effective and smooth running." No action was taken on either recommendation.

The pooling of cargo in order to obtain more complete utilization of ship capacity, which was one of the principal arguments offered in favor of bringing the loading of both military and lend-lease cargoes under WSA control, had been given attention by the Army during 1942, but with only partial results.[29] In August the Transportation Corps and the British Ministry of War

[25] Ltr, WSA to Sen Harry S. Truman, 8 Apr 43, and atchd WSA reply to unions, OCT HB Mar Com Opns; "CIO Ship Operations Plan May Be Revived in Congress," *Journal of Commerce* (New York), April 12, 1943; Frank R. Kent column, *The Evening Star* (Washington), April 14, 1943.

[26] Rpt 10, Pt. 8, *Shipbuilding and Shipping*, 22 Apr 43, pp. 28, 29.

[27] Rpt 3, *Mobilization of Shipping Resources*, 7 Oct 43, p. 9.

[28] Ltr, USW to Sen Harley M. Kilgore, 3 Nov 43, OCT HB Topic Kilgore Com.

[29] Ltr, CG SOS to British JSM, 23 Apr 42, ASF Hq British 1942–43; Conf with British, 10 Aug 42, OCT HB Wylie Cargo; Memo, C of Mvmts Div OCT (McIntyre) for Dir of Opns OCT (Wylie), 21 Aug 42, sub: Vehicles for British, OCT HB Wylie Cargo; Ltr, WSA to CG SOS, 9 Oct 42; Ltr, CG SOS to WSA, 19 Oct 42; Ltr, WSA to CG SOS, 22 Oct 42. Last three in ASF Hq Shipping 1942-43.

Transport had agreed on a more active interchange of cargo for vessels sailing to the United Kingdom. In an exchange of communications with WSA in October the Army had acknowledged the validity of the principle of pooling, but had pointed out that the extent of its application was limited by military considerations. In November the President, apparently at the instance of Mr. Douglas, had addressed a joint memorandum to the Secretary of War, the Secretary of the Navy, and the War Shipping Administrator, emphasizing the need for complete co-operation in obtaining full utilization of ship space, to which the Secretary of War had responded that the matter was receiving constant attention and that the co-operation between the supply agencies of the Army and the Navy was more effective than some reports indicated.[30] Following the discussions which resulted from the issuance of the President's directive of 18 December 1942, cargo pooling made better progress.

In connection with sailings from the Pacific coast the War Shipping Administrator proposed a co-operative arrangement to bring about quicker turnarounds as well as fuller ships, an arrangement which included utilization of the Joint Army-Navy-WSA Ship Operations Committee then being organized at San Francisco.[31] General Gross agreed to the proposal with certain reservations. He wanted it clearly understood that ship allocations to the Army would be made by WSA as in the past and not by the Pacific coast joint committee, which he considered only a local organization to insure better use of the shipping which had been allocated for loading on the west coast. He also stated that Army cargo could not be scattered widely over commercial piers and would not be delivered to such piers until the vessels on which it was to move actually had been assigned. Understanding on these points was followed by better understanding on the general question.

On 19 February 1943 the Army informed the War Shipping Administration that "as . . . in the past" it would call on WSA for space to lift less-than-shipload lots, in order to take advantage of deck loading on WSA vessels and to utilize earlier WSA sailings for high priority items; also that the Army would "continue" to offer space in ships which it operated, or which were allocated to it, for bottom and filler cargo to be supplied from lend-lease shipments.[32] Although the Army communication indicated, and quite accurately, that no new principle was being invoked, the actual pooling of cargo was increased considerably during the months which followed. This was particularly true of cargo interchanges between the Army, the War Shipping Administration, and the British Ministry of War Transport for sailings to the United Kingdom. During the month of February 1943, according to a WSA report, 93 WSA and BMWT vessels, which had loaded heavy lend-lease cargo for British ports, had sailed with almost 5,000,000 cubic feet of unused space

[30] Memo from the President, 19 Nov 42, AG 540 (19 Nov 42); Ltr to the President, 24 Nov 42, AG 540 (19 Nov 42); Memo, CofT for CG NYPE, 15 Dec 42, sub: Cargo, OCT HB Wylie Shipping and Cargo for UK.

[31] Memo, n.d., sub: Program to Speed up Turnarounds of Ships Operating in S and SW Pacific, submitted to Army by WSA; Ltr, CofT to WSA, 18 Jan 43. Both in OCT HB Gross WSA.

[32] Ltr, CofS SOS to WSA, OCT HB Gross WSA. Bottom cargo is heavy cargo, such as steel, placed deep in ship's hold to add to its stability. Filler cargo generally is packaged goods which can be stowed in spaces left empty by the stowage of bulky items such as vehicles, or in irregular spaces created by the shape of the ship.

—some of which might have been utilized to lift light Army cargo.[33] The Transportation Corps and WSA offices in Washington thereafter followed the practice of informing each other of their prospective needs for heavy and light commodities to make balanced cargoes in order that interchanges might be planned in advance. A list of Army freight categories subject to interchange was established and an order of procedure was worked out for the guidance of the Army port of embarkation at New York, which was the port chiefly concerned.

One of the first problems which had to be worked out after the establishment of the War Shipping Administration was the development of a satisfactory method for the allocation of shipping to the several uses. The Army, in order to do effective long-range strategic planning, needed to know well in advance and with reasonable assurance how much shipping it could expect to receive from WSA in the Atlantic and the Pacific. In the beginning WSA was not able to give the Army such assurance because of uncertainty as to the rate of new ship deliveries, the extent to which ships would be sunk or damaged by the enemy, and the number of vessels which would have to be assigned for other purposes, especially lend-lease. Soon after the establishment of WSA the Army took the initiative in setting up tentative requirements by informal agreement among the shipping agencies of the government, and as indicated in Chapter V this task soon was undertaken by the Joint Military Transportation Committee, in collaboration with WSA. Meantime WSA developed its machinery for establishing long-range requirements, making long-range allocations of blocks of tonnage to meet those requirements, and eventually nominating specific vessels for specific voyages. In May 1942 Mr. Douglas, as Deputy War Shipping Administrator, took charge of these activities.[34]

After the War Shipping Administration had received an indication through the Joint Chiefs of Staff regarding the amount of shipping needed for Army movements during ensuing months and had determined the number of ships it could allocate, it remained for the Chief of Transportation to inform WSA as to the vessels required for loading at the respective ports in the immediate future and to obtain from WSA the nomination of specific vessels to meet these requirements. The first function was performed for a time by his operations officer, but it was soon shifted to the chief of the Water Division, together with certain related activities.[35] The second function was performed by the Water Division from the

[33] Memo, Water Div OCT for Gen Wylie, 11 Mar 43, transmitting WSA statement of 9 Mar 43, OCT HB Wylie WSA; Memo, WSA for CG SOS, 11 Mar 43, sub: Shipping Requirements through June 1943, OCT HB Wylie WSA; Memo, CofT for WSA, 13 Mar 43, not sent but used as basis for conf with WSA, OCT HB Wylie WSA; Memo prepared in WSA, 4 May 43, OCT HB Wylie WSA; Memo, Water Div OCT for CofT, 29 Apr 43, sub: Daily Rpt of UK Cargo, OCT HB Wylie Shipping and Cargo for UK; Memo, CG NYPE for CofT, 2 May 43, sub: Policy for Mvmt of Cargo to UK, OCT HB Wylie Cargo.

[34] Memo, ACofS G-4 for Mr. Hopkins, 24 Feb 42, sub: Allocation of U.S. Shipping for 1942, G-4/29717-116; Memo, ACofS G-4 for CofS USA, 26 Feb 42, G-4/29717-116; Ltr, CG SOS to WSA, 9 Mar 42, sub: Requests for Allocations, G-4/29717-26; Ltr, WSA to CG SOS, 2 May 42, OCT HB Topic Mar Com Opns; Bureau of the Budget, *The United States at War*, p. 152.

[35] OCT Office Memo 12, 27 Mar 42, sub: Procedure—Procurement and Acquisition of Vessels for WD, OCT HB Water Div Misc; Ltr, Opns Off OCT to WSA, 13 May 42, OCT HB Water Div Misc; Memo, Opns Off OCT for Water Div OCT, 3 Jun 42, sub: Duties Transferred, OCT HB Meyer Staybacks.

beginning. The WSA officer in charge of allocations held daily meetings with representatives of the Water Division and the Naval Transportation Service, at which vessels were nominated for specific movements.[36] The preparation of daily estimates of cargo available at the respective ports and of vessels required to load such cargo was a function of the Ocean Traffic Branch of the Water Division, and the chief of that branch usually attended the daily meetings. When it appeared probable that there would be insufficient cargo at a particular port to fill vessels nominated for loading there, the Ocean Traffic Branch initiated action to have additional supplies brought forward from technical service depots.

These daily meetings between representatives of the War Shipping Administration and the armed forces dealt not only with initial allocations of ships but also with adjustments necessitated by changed military plans, by the sinking or delay of vessels en route to loading ports, by prospective shortages of cargo at certain ports, and by changed movement priorities. During the latter part of the war, as the result of accumulated experience in planning, reduced submarine activity, the increased number of ships in the WSA pool, and the more dependable flow of supplies to the ports, less frequent meetings were necessary. In addition to the routine procedures, emergency actions to obtain vessels from WSA for special purposes were initiated from time to time by the chief of the Water Division, the Director of Operations, the Chief of Transportation, and even the commanding general of the Army Service Forces. Consultation with the Ocean Traffic Branch usually preceded such actions. Since cargo vessels normally were allocated to the Army for outward voyages only and reverted to WSA after they had completed discharging at oversea ports, special arrangements were necessary when the Army desired to use certain ships for return cargo or for intratheater operation.

Notwithstanding the close co-operation between the two offices and the steady increase in the cargo fleet, the War Shipping Administration's allocations frequently fell short of the Army requirements recognized by the Joint Military Transportation Committee. Acting on a request from the Under Secretary of War, General Gross in February 1943 submitted a statement of "definite failures" on the part of WSA to provide the number of vessels requested, and in so doing expressed the view that more ships should be withdrawn from nonmilitary uses.[37] When this statement was presented to the Board of Economic Warfare, the Deputy War Shipping Administrator stated that military requirements had been met during the past sixty days and that civilian shipping had been cut as much as was wise. The Chief of Transportation persisted, however, in his contention that Army requirements were not being met and in April 1943 presented a detailed study of the situation to General Somervell.[38] While recognizing the difficulty of matching requirements with specific ship nominations, in view of changing military plans and uncertain ship arrivals, he stated that a balancing of total allocations against total requests for the

[36] Memo, Dir NTS for CofT, 13 Mar 42, OCT HB Wylie WSA; Memo, CofT for Dir NTS, 14 Mar 42, sub: Daily Mtgs, OCT HB Wylie WSA; Mtg, 27 Mar 42, OCT 565.4 Army Vessels.

[37] Memo for USW, 25 Feb 43, sub: Failures to Meet Ship Requirements; Memo, USW for CofT, 6 Mar 43. Both in OCT HB Gross WSA.

[38] Two Memos, both 9 Apr 43, sub: Shipping Situation, OCT HB Wylie Shipping Requirements and Allocations 1943.

months of January, February, and March showed monthly deficits of 11, 14, and 24 vessels. He pointed out that since cargo had to be brought to the ports in anticipation of ship allocations, the inevitable result of a deficiency of ships was a backlog of supplies which interfered with port operations and rendered efficient loading difficult.

Despite the careful attention given to the matter, these monthly deficits continued to occur. The obvious explanation was that cargo ships did not become available for allocation as anticipated in the long-range planning. The less apparent explanation was that while the planners took into reasonably accurate account the progressive reduction in ship losses and the increase in construction, they did not fully foresee the extent to which vessels would be held in the theaters for use in local operations and on account of discharging delays.[39]

Although the supply of cargo shipping usually was short of what the military planners wanted and the vessels available for allocation to the Army frequently fell short of its approved requirements, there were times when cargo was short at particular ports or for particular destinations. This was notably true in 1943 when the cargo fleet was being increased rapidly and the production of war matériel was lagging.[40] In September of that year Brig. Gen. Robert H. Wylie, the Acting Chief of Transportation, stated that the "cargo availability picture" was bad at most ports and that the Army had all the ships it required and a "comfortable cushion." How long that situation would continue, he observed, depended on the rate of increase in the production of supplies and whether the current favorable position in regard to ship losses was maintained. The failure of the technical services to move supplies into the ports as rapidly as the ports called for them had been brought to the attention of Army Service Forces headquarters, General Wylie said, and he would continue to press for a more adequate flow. Cargo still was short at east coast ports in November, but the production curve was swinging upward and a shortage of such scope did not occur again during the war.

The allocation of troopships was on a different basis. In the early months of the war the Army applied to the Maritime Commission and later to the War Shipping Administration for the allocation of troop-carrying vessels to meet specific requirements in much the same manner as it applied for cargo vessels. The Army then controlled the vessels only on the outward voyage, and the ships reverted to WSA after completing discharge at oversea ports. Later, because of the urgent need for getting the vessels back to their home ports without the delays incident to loading return cargo, the Army requested that troopships be allocated for the round voyage.[41] This arrangement, which apparently became effective late in 1943, ostensibly applied only to the faster troopships which had small cargo capacity. In effect, however, all

[39] Memo, CofT for Plans Div ASF, 20 Apr 44, sub: Priority of Ships for Pacific Theaters, OCT 563.5 POA; Opns Mtg OCT, 27 Jul 44, sub: Ships for August Program, OCT HB Dir of Opns; Memo, Gen Somervell for Gen Hull OPD, 24 Oct 44, sub: Increased Requests for Shipping, P&O ABC 560 (4 Jul 44) Sec 2; Memo, Admiral Land WSA, 22 Nov 44, ASF Hq Shipping 1944.

[40] Memo, Gross for Somervell, 5 Jul 43, sub: Bank of Cargo, OCT HB Meyer Staybacks; Ltr, Wylie to CG BPE, 26 Sep 43, OCT 563.5 Boston; Ltr, Wylie for CG BPE, 16 Nov 43, OCT HB Wylie Staybacks.

[41] Ltr, CofT to WSA, 8 Dec 42, OCT HB Meyer Staybacks; Memo, Gen Wylie for Gen Franklin, 8 Jun 43, OCT HB Meyer Staybacks; Ltr, C of Water Div OCT to WSA, 25 Aug 43, OCT 565.4 Army Vessels.

WSA troopships, except the temporarily converted freighters, were allocated for round voyages, since their employment was governed solely by troop movement requirements.[42] When nonmilitary passengers and cargo were available for homeward voyages they were lifted by arrangements between WSA representatives and Army transportation officers at the oversea ports, but with the understanding that the voyages would not be delayed. Since there was a substantial amount of such traffic, detailed regulations were published covering the movement of nonmilitary passengers on WSA vessels, both outbound and inbound.[43]

Prior to the establishment of the War Shipping Administration the Army had included in its budget estimates funds required for the procurement, conversion, repair, and operation of Army-owned transports and also for the hire, conversion, repair, and operation of vessels obtained under various forms of charter. In connection with the budget estimates for the fiscal year 1943, which were under consideration in the spring of 1942, the Bureau of the Budget announced that it would eliminate from the Army estimates all funds requested in connection with vessels obtained under forms of charter other than bareboat. That action was predicated on an indication by Congress, in connection with the Sixth Supplemental National Defense Appropriation Act, 1942, that such expenses should be met out of a WSA revolving fund. General Gross strongly recommended that all funds required by the Transportation Corps to carry out its oversea shipping responsibilities be appropriated to the Army, and the Secretary of War supported him in that position; but a meeting between representatives of the Army and the Bureau of the Budget resulted in agreement substantially on the basis which the Bureau had put forward.[44] Funds for the hire, conversion, repair, and operation of vessels operated by WSA agents and allocated to the Army were thereafter to be appropriated to WSA. The memorandum on interdepartmental relationship, approved by the Army and WSA shortly after the above matter was determined, provided that except in cases of emergency WSA would be the sole contracting agent for the Army in the purchasing, chartering, or requisitioning of ocean-going vessels.

The First Supplemental National Defense Appropriation Act, 1943, provided funds for the War Shipping Administration to carry on all the activities and functions which had been assigned to it, including "costs incidental to the acquisition, operation, loading, discharging, and use of vessels transferred for use of any departments or agencies of the United States." [45] In accordance with the policy implicit in that act, and in furtherance of the provisions of the memorandum on interdepartmental relationship, agreements were

[42] Memo, C of Mvmts Div OCT for Dir of Opns OCT (Wylie), par. 1d, 15 Nov 44, OCT HB Mvmts Div Gen; Conf, author with Lt Col H. H. Naughton, 5 Apr 48, OCT HB Mvmts Div Gen. The arrangement was formally sanctioned by JMTC in JMT 80, 6 Nov 44, par. 4.

[43] WSA Traf Reg 6 (rev.), 20 Apr 44; OCT Cir 80-9, Supp. 1, 16 Jan 45, sub: Civilian Passenger Traffic, OCT HB Topic Mar Com Opns.

[44] Memo, Mil Budget Estimate Sec SOS for CG SOS, 21 May 42, sub: Water Trans Policies; Ltr, SW to Bureau of Budget, 27 May 42; Ltr, Bureau of Budget to SW, 4 Jun 42. All in OCT 545.02 Army Vessels. Agreed basis permitted WD to include estimates for vessels "permanently assigned" to it, which would be mostly bareboated vessels, but might include a few assigned on other bases. WD estimates also included funds for loading and discharging WSA vessels allocated to the Army at Army piers. See Ltr, WSA to OCT, 21 Sep 42, OCT HB PE Gen Stevedoring.

[45] PL 678, 77th Cong., par. 14, 25 Jul 42.

worked out between the Army and WSA covering financial and other arrangements.[46] The principal financial arrangements were as follows: When title to a vessel was transferred from WSA to the Army, no charge was made for the vessel or for any conversion effected by WSA prior to transfer in order to make the vessel suit the Army's need, but the Army bore the cost of subsequent alterations and the cost of operation, maintenance, and repair. When vessels were assigned permanently by WSA under bareboat charter or similar arrangement the Army paid no charter hire, and the arrangements regarding conversion, operation, maintenance, and repair were the same as in the case of vessels transferred outright. When vessels operated by WSA agents were allocated to the Army for its use, the cost of maintenance and operation was borne by WSA; no charge was made for the transportation of Army cargo and mail on such vessels, and conversely the Army made no charge for WSA cargo carried on Army transports. When WSA vessels allocated to the Army were loaded or discharged at domestic or foreign piers which the Army controlled, the Army assumed the cargo-handling costs. When WSA vessels allocated to the Army were loaded or discharged at commercial or WSA piers, WSA assumed the cargo-handling costs usually borne by the ship, but the Army paid the charges that accrued on the piers. Army passengers traveling on WSA vessels paid no transportation or subsistence charges, but the permanent military complements placed on such vessels paid subsistence charges. On Army transports military and Army-sponsored civilian passengers paid neither fare nor subsistence charges, passengers traveling at the expense of other government agencies paid subsistence only, and other passengers paid prescribed fares which included subsistence charges. No reimbursement was made for supplies furnished to Army transports by WSA, but since WSA vessels were operated by private agents supplies furnished to such vessels from Army sources were paid for.[47]

Conferences between Assistant Secretary of War McCloy and Deputy War Shipping Administrator Douglas during the latter stages of the controversy over the loading of allocated vessels led to a request by those officials that the Chief of Transportation designate an officer to serve as permanent War Department liaison with WSA.[48] The officer so designated, Col. Werner W. Moore, had been in charge of marine design and procurement for The Quartermaster General and the Chief of Transportation during the emergency period and the early months of the war and later had served as transportation officer for the Trinidad sector of the Caribbean Defense Command. His experience, therefore, gave him an insight into both the constructional and the operational phases of Army marine transportation. As special assistant to the Deputy Administrator, Colonel Moore was as-

[46] WD Cir 332, 22 Dec 43; amplified and revised by TC Cir 25-5, 1 Jan 44; TC Cir 40-2, 24 Jan 44; OCT Misc Ltr 49, 4 Aug 44; WD Memo 55-44, 29 Sep 44; TC Cir 80-9, 28 Oct 44; WD Memo 55-44, 22 Dec 44. All in OCT HB Topic Mar Com Opns. Summary of financial arrangements is based mainly on WD Memo 55-44, 29 Sep 44. Agreement incorporated in this directive did much to eliminate earlier confusion regarding financial adjustments.

[47] WD Memo 55-45, 28 Aug 45, stated that thereafter WD would reimburse WSA for fuel oil and coal furnished to Army vessels.

[48] Memo, OASW for ACofS for Opns SOS, 14 Jan 43, OCT 201 Col. Werner W. Moore; Memo, C of Mil Pers Div OCT for CG ASF, 19 Nov 43, OCT 201 Col. Werner W. Moore; Conf, author with Col. Moore, 31 Mar 48, OCT HB Topic Mar Com Opns.

signed to work on many problems in which both WSA and the Army had an interest. Such assignments were made by WSA, not by the Army. The position was discontinued in July 1944, by which time the working relationships between WSA and the Transportation Corps had become stabilized.

As indicated above, General Gross held strongly to the opinion that matters affecting allocation of ships, as well as matters of policy, should be worked out between his office and the headquarters of the War Shipping Administration rather than between Transportation Corps and WSA representatives at the ports. He believed that better utilization of the limited shipping resources would be achieved in that way. Experience showed also that the headquarters offices were in a better position to solve difficulties by compromise, as was so often necessary. The latter point was illustrated early in 1942 when a controversy developed between the Seattle Port of Embarkation and the Seattle representative of WSA regarding the control of shipping and the determination of priorities in the Alaska service, then considered of high strategic importance.[49] After a futile attempt to have the matter settled between representatives of the Army and WSA at the port, a division of responsibility was worked out in Washington in consultations between the Office of the Chief of Transportation, WSA, and the Navy.

While firm in his insistence on centralized control of ship allocations, General Gross favored direct dealings and full co-operation between the local representatives of the War Shipping Administration and the Transportation Corps in matters affecting the loading, discharging, operation, and repair of vessels.[50] In addition to participating in numerous joint committees at the ports, the personnel of the two agencies worked in close co-ordination in the day-to-day handling of the affairs of the ships with which both were concerned. The records indicate that a high degree of harmony and helpfulness prevailed in these relationships.

Relations with the Navy

The relations of the Army and the Navy in connection with ship operations would have been comparatively simple had the prewar plan been carried into effect. Joint Army and Navy Basic War Plan, RAINBOW 5, contemplated that in case of war the Army would continue to operate ports of embarkation but that the Navy would "provide sea transportation for the initial movement and the continued support of the Army and Navy forces oversea," and in so doing would man and operate the Army transports.[51] That arrangement was set aside, however, and the maintenance of separate ocean transport services gave rise to numerous problems in connection with the joint use of troop and cargo ships and the convoying and routing of merchant vessels.

The question of placing the Army transports under Navy manning and operation was actively considered during the year preceding our entry into war. In November 1940 G-4 suggested that this be done without waiting for an actual state of war, but the War Plans Division and The Quarter-

[49] Memos, Opns Off OCT for CofT, 5 and 19 Apr 42, OCT HB Wylie Seattle; Draft of agreement initialed by Gross, 6 Apr 42, OCT HB Wylie Seattle; Ltr, Opns Off OCT for WSA, 12 May 42, OCT 544.2 Seattle; Memo, CG SOS for ACofS OPD WDGS, 15 May 42; 2d Ind SPE for CofT, 6 Oct 42. Last two in OCT 544.2 Alaska.

[50] See Ltr, CofT to CG NOPE, 22 Oct 42, OCT HB Wylie Staybacks.

[51] JB 325 (Ser 642-5), 30 Apr 41, Sec VII, par. 50, and Sec IX, par. 55; also rev. 1, 19 Nov 41.

master General did not concur.[52] In April 1941, actuated by the U.S.-British staff conversations which were concluded during the preceding month, the Navy proposed that the subject be discussed by representatives of the two departments. The Army assented, with the understanding that if such an arrangement should be made the Army would retain control over the missions and the movements of the vessels.[53] Agreement was reached substantially on that basis, and since the Navy believed that it could accomplish the manning in from 30 to 45 days, a schedule was prepared which would have placed all Army troopships and freighters under Navy operation by the end of July.[54] The Navy did not accomplish the task as had been anticipated, however, and by November had placed crews on only seven Army transports; G–4 then expressed doubt as to the Navy's ability to give satisfactory service to the Army, because of the subordination of this service to other Navy interests.[55]

On the day after the Japanese attack on Pearl Harbor, representatives of the armed services and the Maritime Commission discussed the subject and decided that the Army and the Navy should continue their separate transport services, subject to the Navy's preponderant interest in ships in the Pacific.[56] The Navy, confronted with a heavy demand for crews for combatant vessels, soon proposed removing its personnel from six of the seven Army transports and retaining the operation of only one, which was being converted to a combat loader; it also proposed turning over to the Army the *LaFayette* (ex-*Normandie*) which was then undergoing conversion to a troop transport. To this the Army agreed, anticipating no difficulty in providing civilian crews for these ships, in addition to approximately 140 other vessels then in its service.[57]

The entire question was reopened almost immediately, however, when the Army undertook to bring the joint war plans into harmony with these informal arrangements. The Navy then advised that, after further consideration, and with the consent of the Army Chief of Staff, it would continue to man the six Army transports; also that it would man the *LaFayette* when that vessel was ready for service.[58] Late in February

[52] Memos, ACofS G–4 for DCofS USA (Moore), 26 Nov 40 and 7 Dec 40, sub: Opn of ATS by Navy; Memo, QMG for ACofS G–4, 3 Dec 40, QM 570 T–W–C (Army Transports); Memo, ACofS WPD for ACofS G–4, 23 Dec 40, WPD 2789–1. All in G–4/29717–51.

[53] Memo, C of Trans Br G–4 for ACofS G–4, 7 Apr 41, OCT HB Wylie Navy Crews for Army Transports; Memo, ACofS G–4 for CofS USA, 7 Apr 41, sub: Manning Army Vessels with Navy Crews, G–4/29717–51.

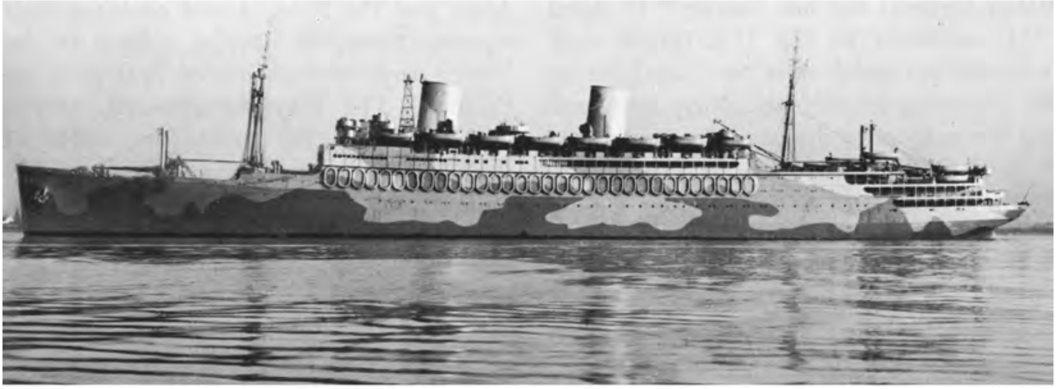
[54] Memo, ACofS G–4 for CofS USA, 14 Apr 41, G–4/29717–51; Memo, CofS USA for CNO USN, 30 Apr 41, G–4/29717–51; see also Memo, JPC for JB, JB 320 (Ser 686), 28 Apr 41, OCT 571.22 Army Transports.

[55] Memo, CNO for all Bureaus and Naval Districts, 7 Jul 41, G–4/561.22 Navy; Memo, ACofS G–4 for WPD, 19 Nov 41, sub: Transfer of ATS to Navy, G–4/29717–51.

[56] Memo, C of Trans Br G–4 for Exec Trans Br G–4, 8 Dec 41, Item 1, OCT HB Gross Day File; Memo, CNO for JB, 17 Dec 41, sub: Sea Trans, OCT HB Gross Navy; Memo, C of Trans Br G–4 for WPD (Gerow), 23 Dec 41, WPD 2789–29.

[57] Memo, CNO USN for CofS USA, 9 Jan 42, sub: Removal of Navy Crews from Army Transports; Memo, CofS USA for CNO, 14 Jan 42; Memo, ACofS G–4 for CofS USA, 23 Jan 42. All in G–4/29717–51.

[58] Memo, ACofS G–4 for CofS USA, 17 Jan 42, sub: Change in Joint Action on Water Trans, OCT HB Gross Day File; Memo, CNO for CofS USA, 26 Jan 42, G–4/29717–51; Memo, CNO for BUSHIPS, etc., 27 Jan 42, G–4/29717–51. Four of the six Army transports were turned back to the Army later in the war. The giant *LaFayette,* following serious damage by fire during conversion, capsized at her pier in New York harbor and never returned to service.



TROOPSHIPS OPERATED BY THE NAVY. *The* Wakefield *(top),* Mount Vernon *(center), and* West Point *(bottom). These converted American passenger liners served both the Army and the Navy as personnel carriers.*

1942 the Chief of Naval Operations requested the concurrence of the Army Chief of Staff in a memorandum to be submitted to the Joint Board, which proposed not only placing all Army transports under Navy operation but also making the Navy responsible for arranging with the War Shipping Administration for the allocation of such additional ships as were required for military purposes. General Marshall did not concur; rather, he contended that the establishment of WSA by executive order of 7 February 1942 had abrogated that feature of the Army-Navy joint action agreement and had provided for Army control of its own transports and for allocation of WSA vessels directly to the Army.[59]

Late in 1942, when the general question of more effective co-ordination between Army and Navy oversea supply operations was being considered, the subject of unified operation of the transport fleets again came to the fore, together with consolidation of other transportation functions. On 9 November 1942 General Gross forwarded to General Somervell a plan which proposed making the supply of the oversea bases of both the Army and the Navy a function of the Army Services of Supply; having all movements of Army and Navy supplies for oversea destinations "controlled and performed" by the Army; and having all troop and cargo transports used by the Army and the Navy operated by the Navy with Coast Guard crews, but controlled by the Army Transportation Corps.[60] The plan was presented as a basis for discussion with the Navy, and Gross evidently had misgivings regarding the outcome. In an accompanying note he stated to Somervell that in consenting to turn over all troop and cargo ships to the Navy for operation, the Army would be losing "much of the power of independent action" which it then enjoyed in accomplishing its supply mission. He warned that unless the Army firmly controlled the loading and assignment of the vessels its position would be weakened more than could be risked in a war in which the shipping requirements were so predominantly those of the Army. He also considered it important that the Army have control of the movement of supplies of both the Army and the Navy, not only by sea but from points of origin to the ports. Gross recommended that, if the Navy should reject these Army controls, the proposed agreement be limited to supply matters and leave the transportation situation unchanged. He did not then indicate how, if the Army proposal were acceptable to the Navy, vessels currently operated by agents of the War Shipping Administration and allocated for the use of the armed services would be brought under Navy operation, but stated later that it would require a change in the executive order by which WSA was created.

After consideration of the Army's plan, the Navy submitted a counterproposal which provided for Navy operation of the troop and cargo transports used by the Army and the Navy, including those allocated by the War Shipping Administration, Navy control of routings and diversions, assignment of vessels to particular areas and operations by the Joint Chiefs of Staff, op-

[59] Memo, CNO for CofS USA (Betty for George), 26 Feb 42, and Incl; Memo, CofS USA for CNO, 27 Feb 42, sub: Opn of Army Transports. Both in OCS 16374–53.

[60] Plan to Simplify Supply and Trans of Overseas Forces of both Army and Navy, indorsed to Somervell by Gross, 9 Nov 42; Penciled Memo by Gross atchd to plan, n.d., sub: Conf with Navy. Both in ASF Hq Trans 1941–42. Col Finlay, Exec OCT, recalls that plan was prepared at Somervell's request.

eration of ports of embarkation and oversea discharge terminals by the Army, and separate control by the Army and the Navy of their respective supply movements to the ports.[61] Gross discussed the counterproposal thoroughly with his staff and then informed Somervell that he was convinced that the Navy plan, which contemplated unified control of shipping but not of the movement of supplies, would not work and would not justify turning over the ships then under Army control to the control of the Navy. He expressed the opinion that "nothing less than the full control over the use of all transports and dry cargo ships by the Army to move all troops and cargo in accordance with theater priorities and within allocations set from time to time by the Joint Chiefs of Staff would do the job effectively." He stated that the Army, because of its huge supply responsibility, could not be satisfied with a system that depended on compromising conflicting opinions. Gross accordingly recommended that "no change be made in the operation and control of ships by the transportation services of the Army and Navy other than on the basis of mutual cooperation to meet priorities set by theater commanders."

Consideration of the subject did not end there, however. Somervell, or Gross, or both believed that the duplications and conflicts which seemed inevitable if the Army and the Navy continued to maintain separate transportation systems should be avoided if possible. Accordingly, in mid-December 1942 another plan was put forward by the Army. This plan called for a unified oversea transportation service, to be responsible for all transportation for the armed services (except for the Fleet), organized along the following lines: the transportation agencies of the Army Services of Supply to control the movement of oversea supplies to the ports, the storage of such supplies en route to and at the ports, and the loading of the ships; the Navy to handle the manning and repairing of vessels, the control of vessels in port, and the routing and escorting of vessels; the head of the joint oversea transportation service to be an Army officer with a Navy officer as principal deputy (since 75 to 90 percent of the forces overseas would be Army personnel); the joint service to be under the command of the commanding general of the Army Services of Supply, who would have a dual responsibility to the Chief of Staff of the Army and the Chief of Naval Operations; the Joint Chiefs of Staff to assign shipping to the several strategic areas.[62] A detailed proposal for the implementation of this plan, including procedures relating to movement priorities, was forwarded to the Navy a fortnight later. In it was a clause calling for the installation of naval crews on War Shipping Administration vessels allocated to the joint service, "as expeditiously as practicable."

Once more the Navy came back with a counterproposal. The idea of "sweeping unification" put forward by the Army was rejected, since the Navy considered it inadvisable to make drastic changes in the organization or in the logistical responsibili-

[61] Plan to Consolidate Supply and Transport of Overseas Forces of Army and Navy, n.d., OCT HB Topic Army-Navy Joint Logistics; Memo, Gross for Somervell, 23 Nov 42, same sub, OCT 020 Joint Trans Sv—Army and Navy.

[62] Memo, General Somervell for Admiral Horne VCNO, 13 Dec 42, sub: A Single Oversea Trans Sv; Draft Memo for Horne, submitted by Gross to Somervell, 21 Dec 42, with detailed plan. Both in OCT 020 Joint Trans Sv—Army and Navy. Plan eventually was forwarded with Memo, Maj Gen W. D. Styer CofS SOS for Admiral Horne, 30 Dec 42, ASF Hq CofS Trans File.

ties of the services at that time. "Results equally effective," the Navy believed, could be obtained by a "system of coordinators, if vested with sufficient power of decision, control, and supervision." [63] But the Army did not look with favor on the Navy's plan for co-ordination of transportation through a system of boards operating under the Joint Chiefs of Staff. The Army preferred to effect the necessary co-ordination of the two transportation services through the already established Joint Military Transportation Committee, or by direct negotiations. The Army believed that the plan for a unified transportation service was worthy of further consideration but apparently was convinced that it was not likely to be adopted "because of basic differences of organization." For all practical purposes, the wartime effort to set up a single transportation service for the Army and the Navy ended there, and from that point forward the emphasis was on co-ordination of operations.

Underlying the differences of opinion which produced a stalemate in the effort to achieve a unified transportation system were fundamental differences in the logistical systems of the Army and the Navy. The entire system of naval logistics at that time was decentralized: the Naval Transportation Service dealt only with ocean transportation; the movement of supplies to the ports and within the country was a function of the Bureau of Supplies and Accounts; because of the dispersion of procurement and shipping responsibilities Navy headquarters had no adequate facilities for making accurate estimates of its shipping requirements.[64] The Army's transportation system was more closely integrated: the Chief of Transportation had supervision of both inland and transoceanic transportation, had a close liaison with the technical or supply services of the Army and the headquarters organization of the Services of Supply (later Army Service Forces), and actually controlled the movement of both troops and supplies through the Traffic Control Division in his office and the Oversea Supply Divisions at the ports of embarkation. The Army based its effort to centralize control of transportation and supply movements for the armed services on its own experience. The Navy shrank from the adoption of such a plan, because that would have required extensive adjustments in its logistical organization and methods.[65] Beyond the organizational and procedural differences, however, there was a natural and evident reluctance on the part of each service to place complete control of any important phase of its logistical operation in the hands of the other.

Although the efforts to bring the ocean transportation systems of the Army and the Navy under a single operating management

[63] Memo, ACNO for Logistical Plans (Admiral Oscar C. Badger) for VCNO, 7 Jan 43, sub: Plan for Co-ordination of Army-Navy Oversea Trans and Logistics; Memo, General Styer for Admiral Badger, 16 Jan 43. Both in OCT HB Topic Army-Navy Joint Logistics. The exchange of communications was accompanied by frequent discussions of the subject by representatives of the two services.

[64] See Duncan S. Ballantine, *U.S. Naval Logistics in the Second World War* (Princeton, 1949), pp. 70–80, 90–94, 101–08, 119, 124–28. Memo, Somervell for Horne, 1 Apr 43, sub: Increasing the Powers of the Naval Trans Sv, OCT 020 Joint Trans Sv—Army and Navy.

[65] For Army views on duplications and conflicts arising from separate Army and Navy transportation operations see joint Memo, Wylie, McIntyre, and Meyer, for Finlay Exec OCT, 19 Apr 44, sub: Testimony, OCT HB Wylie Staybacks. See also statement by Somervell before Select Com on Postwar Mil Policy, HR, 78th Cong., 2d Sess., Hearings pursuant to H. Res. 465, *Proposal to Establish a Single Department of Armed Forces*, Pt. 1, pp. 100–102.

did not succeed, the Navy provided crews for certain Army transports and operated them on missions established by the Army. In other respects also the Army Transportation Corps and the Naval Transportation Service complemented and assisted each other in an effort to increase the efficiency with which the men and matériel of the armed services were moved between the zone of interior and the theaters and within the theaters.

Soon after our entry into the war the Army arranged that the Maritime Commission should construct fifty troop transports for its use.[66] Up to the end of 1942 the Transportation Corps had planned to man the vessels with civilian crews, but since it was anticipated that they would be utilized extensively in forward areas the Under Secretary of War proposed that consideration be given to the advisability of manning them with naval personnel.[67] The views of the commanding general of the New York Port of Embarkation were sought on the general question of replacing civilian with naval crews, and he strongly favored the latter on grounds of discipline, continuity of service, and co-operation between vessel crews and gun crews.[68] Similar inquiries sent to the theater commanders brought replies which predominantly favored naval crews, although the Army commanders in the Central and the Southwest Pacific saw no advantage in naval as against civilian manning.[69]

Early in 1943 the Navy, having learned through "informal conversations" that it might be called on to man the new troopships, requested the Army to advise it in this regard as soon as practicable, in order that it might begin to assemble personnel and arrange with the Maritime Commission for crew accommodations according to Navy standards to be installed while the vessels were under construction.[70] This request brought into active discussion a matter in which the Transportation Corps had a keen interest—the larger crews carried by Navy-manned transports and the consequent danger of reduced troop capacity on the new vessels.[71] The Army's reply to the Navy indicated that existing plans for the new transports called for Army manning, but apparently hinted that these plans were subject to change, for the Navy at once began to study the possibility of restricting

[66] CCS 56/1, 6 Mar 42, par. 7; Memo, Mvmts Div OCT for Col. Wylie, 2 Sep 42, sub: Ships under Cons for Army, OCT HB Wylie Staybacks. Of these troopships 30 were converted cargo ships (C–4 type) and 20 were wartime passenger ship designs (P–2 type). Other cargo ship conversions were arranged later.

[67] Memo, USW for CG SOS, 1 Jan 43, and Reply, 2 Jan 43, AG 231.8 (12–29–42) (1). Navy had proposed and Army had agreed to install features which would make these vessels more readily adaptable for combat loading. Memo, CNO for CofS USA, 19 Aug 42, sub: U.S. Army Troopships, and reply, 24 Aug 42, OCT HB Gross Navy.

[68] Memo, Gross for Somervell, 29 Dec 42, sub: Disadvantages of Civ Crews, OCT HB Gross Crews.

[69] Rads, CM–OUT 9568 to 9576, 29 Dec 42; Memo, Styer for Gross, 25 Jan 43, OCT HB Gross Crews.

[70] Memo, VCNO for CofS USA, 15 Jan 43, sub: Army Transports—Manning by Navy, OCT 231.8 Army Vessels.

[71] General Wylie presented comparisons indicating that both operating and gun crews on Navy-manned transports were much larger than on similar Army transports, and that larger reserves of stores were carried. See Memo for Gen Gross, 24 Mar 43, OCT HB Wylie Navy Crews of Army Transports. Larger naval crews are explained as necessary on transports operating in Pacific forward areas to avoid delays in unloading at ports where there were no shore gangs and delays on account of needed repairs at ports where there were no shore repair facilities. See Memo, Rear Adm John B. Heffernan for C of Hist Div SSUSA, 13 Dec 49, pars. 4 and 5, OCMH. Naval transports subject to use in assault operations naturally carried larger gun crews than vessels in regular transport service.

the size of its crews on the vessels in question.[72]

A concrete proposal on this subject was submitted to the Navy in April by General Somervell, who in so doing referred to a "suggestion made by the Navy that the new Army transports be crewed by the Navy." [73] The proposal stipulated that the Army should have control over the missions and the schedules of the vessels and over their loading and unloading, as in the case of the several old Army transports already manned with naval personnel; that the vessels should be returned to transport service promptly after completion of any task force operations to which the Joint Chiefs of Staff might assign them; and that the size of the Navy crews should be limited so as not to impair their capacities as transports. The Navy agreed in principle to these stipulations, but indicated that it would be the judge as to what size crews were required for the services to be rendered. General Somervell accepted this condition, but expressed the view that the determination of such matters should be "a command decision with all phases of the shipping problem in mind," rather than a technical decision by a bureau with professional reputation to consider. In this as in other aspects of shipping Somervell and Gross felt that the Navy held too rigidly to its technical standards, considering the scarcity of bottoms.

Responsibility for the decision to place naval crews on these transports is not clearly established in the records. The Office of the Chief of Transportation had no enthusiasm for the plan, probably because it feared that its control over the vessels would be qualified thereby. A naval officer who participated in some of the conferences states that the Navy was not anxious to undertake this manning task, but reluctantly agreed to do so because that seemed to offer the best solution to a problem.[74] The evidence seems to warrant the conclusion that the initiative came from General Somervell or some higher official in the War Department.

The army urgently needed the new troop transports, and early in May it entered a vigorous protest on learning through the Maritime Commission that completions would be delayed several months because of the extent of the alterations required by the Navy.[75] The Navy's response defended the structural changes which were being made in order to adapt peacetime designs to wartime service, but indicated that every effort would be made to expedite deliveries. Soon thereafter the Maritime Commission reported to the Chief of Transportation that as a result of the Army's protest the Navy had become more moderate in its requirements. Nevertheless, after two months the Army again approached the Navy on

[72] Memo, VCNO for BUSHIPS, 1 Feb 43, OCT 231.8 Army Vessels; Memo, VCNO for BUPERS, 3 Feb 43, OCT 231.8 Army Vessels; Memo from Army, 26 Jan 43, cited in Navy Memo of 1 Feb 43, was not found.

[73] Memo, Somervell for Horne, 1 Apr 43, sub: Navy Crewing of Army Transports, OCT HB Gross Crews; Memo, Horne for Somervell, 24 Apr 43; Memo, Somervell for Horne, 27 Apr 43. Last two in OCT 231.8 Army Vessels. In addition to the 50 new troopships, Somervell suggested placing naval crews on 50 projected airplane and tank carriers and on certain older troopships, but this was not done.

[74] Memo, Rear Adm John B. Heffernan for C of Hist Div SSUSA, 13 Dec 49, pars. 4 and 5, OCMH.

[75] Memo, Somervell for Horne, 7 May 43, and reply, 11 May 43, sub: Delivery Dates; Penned Memo, Gross for Somervell, 12 May 43. All in OCT HB Gross Mar Com.

this subject.[76] The Army pointed out that it had made commitments at the Casablanca Conference based on the Maritime Commission's delivery schedule and was embarrassed by the serious disruption of that schedule. The Transportation Corps suggested that in order to place the new vessels in service with the least possible delay, the armament and crew quarters installed prior to delivery be kept to essentials and that any further work of that nature be done during subsequent lay-up periods; also that the shakedown cruise be omitted when this would enable a vessel to join an earlier convoy. The available records do not show the Navy's reaction to these suggestions, but the testimony of officers who were in a position to observe the developments indicates that the only concession which the Navy made was to shorten shakedown cruises when the need for the ships was especially urgent.[77]

The Navy actually placed forty-nine of these transports in full commission. In addition to manning them, the Navy was responsible for their maintenance. The Army controlled their schedules and also their loading and unloading, which for the most part took place at Army piers. The Office of the Chief of Transportation and the Naval Transportation Service conferred in preparing sailing schedules and in establishing the availability of ships for repairs.[78]

In general the operation of these transports worked out satisfactorily to General Gross and his staff. There were numerous problems, but through close liaison they were soon settled. The Army, for example, reported that some of the Navy ship commanders had "inflexible" ideas regarding billeting, and requested NTS to call to their attention the fact that the agreement concerning the vessels provided for billeting in accordance with plans prepared by the Army port commanders. In a few instances Navy ship commanders insisted on getting Navy concurrence before executing homeward sailing orders issued by Army oversea commanders involving diversions from the usual routes. Conflicts of authority between Navy commanders and the Army's permanent complements on the vessels caused some difficulty, until detailed joint instructions covering jurisdictional matters and operating procedures were issued.[79] A more basic complaint from the Army's standpoint was that, although the Navy had agreed to operate the ships on schedules established by the Army, it did not do so automatically but entered into long "bargaining" discussions in support of its own interests.[80] This type of joint operation increased the amount

[76] Memo, CofT for Dir NTS, 23 Jul 43, OCT 564 Army Vessels; Memo, OCNO for CofT, 24 Jul 43, OCT 564 Army Vessels; Memo, Somervell for Horne, 2 Aug 43, sub: Loss of Troop Lift, OCT HB Meyer Staybacks.

[77] Confs, author with Capt W. N. Mansfield USN and Lt Col. H. H. Naughton USA, 7 Apr 48, OCT HB Topic Navy.

[78] WD Cir 167, par. 1, 29 Apr 44; Memo, Dir NTS for CofT, 18 Sep 43, sub: Transport Assignment; Memo, ACofT for Dir NTS, 28 Sep 43. Last two in OCT HB Meyer Staybacks.

[79] Memo, Dir NTS for Fifth Naval Dist, 19 Sep 43, indicated original intention of NTS was that Navy should control homeward routing, OCT HB Meyer Staybacks; Memo, Exec for Opns OCT for Capt Hunt USN, 7 Mar 44, sub: Navy Transports Assigned Army Missions, OCT HB Meyer Staybacks; Memo, ACofT for Dir NTS, 24 May 44, sub: *General Mann,* OCT HB Mvmts Div Farr Staybacks; WD Memo, 55–45, 22 May 45; Conf with Col Naughton cited n. 77; Conf with Lt Col J. A. Griffin, 7 Apr 48. Last three in OCT HB Topic Navy.

[80] Comment 3, Col Donald E. Farr, on Ltr, Wardlow to Farr, 24 Feb 48, OCT HB Mvmts Div Gen. Col Farr was Chief of Mvmts Div OCT and was responsible for scheduling these and other transports.

of administrative detail and the time required to dispose of it.

During the repatriation period an accumulation of complaints by soldiers returning from the Pacific theaters regarding conditions on Navy-operated transports led to a request by the Chief of Transportation that The Inspector General investigate this matter.[81] The Inspector General's report indicated that some of the complaints were without foundation and that those relating to the insufficiency and poor quality of food were not general but applied only to certain vessels. The Navy took steps to improve the food but stated that, because of the rapid rate of demobilization, there was small possibility of carrying out a suggestion that additional commissary and steward personnel be assigned to the vessels.

While consideration was being given to the question of placing Navy crews on the new Army transports which were intended primarily for operation between the zone of interior and the theaters, the Navy proposed that all merchant vessels which were operated habitually within the theaters, in direct support of naval or military activities in forward areas, be Navy-manned.[82] General Gross opposed this proposal because of the increased "power to veto" it would give the Navy over Army operations, the larger space required for Navy crews, and the fact that the existing system had not been found unsatisfactory.[83] During the discussion of this subject in the Joint Chiefs of Staff, General Somervell stated that "the Army would prefer to have all ships manned by Navy crews," but did not like the prospect that it then would have to "petition" the Navy for their use.[84] Also, Somervell was opposed to disturbing the crew situation in the Southwest Pacific, where he felt an excellent job had been done in obtaining ships and manning them with civilians. Agreement was reached in April 1943 on the basis that when Navy crews were placed on vessels which had been operated by or for the Army, those vessels would remain in the service and under the control of the Army and that the Southwest Pacific would be excepted from the arrangement unless and until the theater commander should request naval manning.[85] Some months later, when WSA protested against the manning of so many freighters and tankers by the Navy on the ground that this made them unavailable for lend-lease and civilian uses, the Joint Chiefs of Staff indicated that the arrangement did not apply to vessels in service between the zone of interior and the theaters, even though they might remain in the theaters for extended periods. It developed that this agreement was of limited effect, since combat loaders and certain transports used in the theaters already had Navy crews, and other merchant vessels moved in and out of the forward areas rather than operating there consistently.[86]

[81] Memo, SFPE for Comdr WSF, 11 Feb 46, and reply, n.d.; Memo, CofT for TIG, 18 Feb 46; Memo, TIG for CG ASF, 22 Mar 46. All in OCT 560 Navy Vessels.

[82] JCS 240, 20 Mar 43.

[83] Memo, Gross for Req Div SOS, 22 Mar 43, sub: JCS 240, OCT HB Wylie Navy Crews on Army Transports.

[84] JCS 69th Mtg, 23 Mar 43, Item 2.

[85] JCS 240/2/D, 23 Apr 43; JCS 240/5/D, 27 Oct 43; JCS 641, 23 Dec 43; JCS 641/1, 31 Jan 44; see also Memo, Wylie for Somervell, 28 Dec 43, sub: JCS 644, OCT HB Wylie Staybacks.

[86] Request of CG SWPA that Navy man certain merchant vessels permanently assigned to theater was only partially complied with because of limited personnel. See Memo, CG ASF for CNO, 15 Nov 43, OCT 565.4 SWPA; JLC 42/3, 19 Feb 44, Incl A; JCS 644/1, 14 Mar 44; Memo by JCS Secretariat, 22 Mar 44, P&O ABC 570 (3-1-43) Sec 2.

Both the Army and the Navy procured a large amount of equipment which had to be towed to the theaters, such as barges, small tugs, cranes, car floats, and floating power plants. In addition to the ocean-going tugs owned by the Army, the Navy and the War Shipping Administration had craft of this type. Some of these large tugs were intended for use in the theaters, but others returned to home ports after delivering their tows. Early in 1944, in order to bring this traffic under better regulation, the three agencies agreed to prepare joint priority lists.[87] The purpose of the agreement was to insure that all ocean-going tugs were used to best advantage and that the tows included the items most urgently needed overseas. As regards towing in the Pacific, the agreement was administered by a committee in Washington which met weekly to establish priorities and prepare towing charts. The Chief of Transportation was represented on the committee by an officer of his Water Division, usually the head of the Harbor Boat Branch. The detailed instructions issued by the committee permitted the west coast representatives of the agencies concerned to change the towing charts when such action was found desirable, but the Chief of Transportation required his port commanders to obtain the approval of his office before agreeing to such adjustments. Transatlantic tows during the spring and summer of 1944 were of great strategic importance, and therefore the basic arrangements were made on higher levels. Thereafter little equipment was towed to Europe and the emphasis was on the Pacific. On 7 July 1945 Col. Raymond M. Hicks, Chief of the Water Division, stated that the Transportation Corps had been self-sufficient up to that time but that nearly all of its ocean-going tugs had been delivered to the theaters so that it soon would be dependent on the Navy and WSA in that respect.[88] On that date the Transportation Corps had forty-one tugs and tows at sea en route to the theaters.

The adoption of the Basic Logistical Plan early in 1943 was followed by broader co-operation between the Army and the Navy in oversea logistical operations, including the joint utilization of ships and ship space. General arrangements for handling the oversea movements of the two services were worked out by the Office of the Chief of Transportation and the Naval Transportation Service in Washington. This involved considerable trading which did not always prove easy, and in OCT it sometimes was felt that the Navy drove a hard bargain.[89] The detailed arrangements for the joint loading of vessels were worked out at the ports. At Atlantic and Gulf ports, where the Navy's traffic was relatively light, this function was performed by local representatives of the Army, the Navy, and the War Shipping Administration, working more or less informally. On the Pacific coast, where the Navy's traffic was heavy, the Army-Navy-WSA Ship Operations Committee exercised an over-all supervision. The interchange arrangements in regard to freight were relatively simple, and all types

[87] Memo of Agreement, 28 Jan 44, sub: Joint Priority Lists for Ocean Towing Operations, ASF Hq Shipping 1944; Joint Memo, Dir NTS, CofT, and WSA for their representatives at Pacific ports, 7 Mar 44, OCT HB Water Div Towing; Memo, CofT for CG SFPE, 30 Sep 44, sub: Tug and Tow Mvmt Charts, OCT 565.2 SF 3d Geog File.

[88] Proceedings, Mtg of Supts of Water Divs, 7 Jul 44, pp. 15–16, OCT HB Water Div Misc.

[89] See pencil Memo, Gross for Wylie, 8 Aug 42, regarding proposal to borrow refrigerator ship from Navy for one trip to Alaska, OCT HB Topic Navy; Memo, Oversea Tr Br Mvmts Div OCT for C of Plng Div OCT (Farr for Stokes), 19 Nov 43, OCT HB Farr Staybacks.

of ocean-going vessels with cargo capacity were considered in the pool, including the larger types of Navy landing ships. The joint use of ships which had troop capacity, including combat-loading merchant vessels and combatant vessels, involved more complicated problems, which will be dealt with when oversea troop movements are discussed.

The joint logistical operations of the Army and Navy, including their joint use of ships, created a demand for greater uniformity in shipping procedures. The first real progress in that direction came with the publication of "United States Army and Navy Shipping Procedures" in March 1945.[90] This pamphlet, an adaptation of a War Department manual, was developed by personnel of Army Service Forces headquarters, the Office of the Chief of Transportation, and the Navy. Its basic purpose was to simplify and regulate the flow of shipping documents and information regarding ship movements, passengers, and cargoes between the United States and the theaters, and between theaters. Insofar as practical it prescribed uniform procedures for both Army and Navy, and where complete uniformity was not considered feasible it explained the differing methods so that each service would understand the other's system. It provided that a central record control unit, to facilitate the execution of the plan, should be set up at each United States port and in each theater, jointly whenever practicable. Up to the end of the war joint units, known as Army-Navy Shipping Information Agencies (ANSIA), had been established at San Francisco, Los Angeles, Seattle, and Boston. Although the early termination of hostilities prevented a thorough testing of the plan, the Army port of embarkation at San Francisco, where ANSIA began functioning in May, reported favorable results. Whether any such units were established overseas is not indicated in the records available.

Close liaison on all levels was maintained in the Army-Navy co-operative effort, and General Gross and the Director of the Naval Transportation Service assigned permanent liaison officers each to the other. The Navy liaison officer, Lt. Comdr. George E. Taylor, made his headquarters in the Office of the Assistant Chief of Transportation for Operations, but also worked closely with the Water Division on technical developments affecting the two services.[91] The Army liaison officer with NTS was Lt. Col. Joseph S. Crane. In addition to giving personal attention to a great variety of matters on behalf of the Chief of Transportation and his principal assistant, Colonel Crane served as Army representative on the Joint Merchant Vessel Board. During peacetime and the early months of the war the board was engaged in surveying merchant vessels and preparing general plans to facilitate their conversion to war service.[92] The board also served as a clearing house for technical information regarding merchant vessels which the Army or the Navy desired to acquire, but that service was on a diminishing scale after the War Shipping Administration began functioning.

[90] WD TM 38-412/OPNAV 39-H3; Memo, Dir Contl Div ASF for CG ASF, 8 May 45, OCT HB Contl Div Procedures Br; Monthly Vessel Utilization Summary, 27 Aug 45, OCT HB Water Div Vessel Utilization; SFPE Quarterly Hist Rpt, Apr–Jun 45, pp. 62–65, OCT HB SFPE; Memo, SFPE for CofT, 8 Oct 45, sub: Hist Rec and Incl, ANSIA, OCT HB Topic Port Co-ordination.

[91] Memo, CofT for Dir NTS, 31 May 45, gives Gross's high estimate of Taylor's services, OCT HB Gross Day File.

[92] Memo, Lt Col Crane for TC Historian, sub: Joint Merchant Vessel Bd, 7 Sep 42, OCT HB Topic Army-Navy JMVB.

Naval Convoy and Routing Arrangements

Under the joint war plan of the Army and the Navy the protection of merchant shipping was a naval responsibility.[93] Early in 1941 the Navy and the British Admiralty made arrangements for sharing this responsibility, in case the United States should become a party to the war in Europe, in order to obtain the most economical use of their combined resources. Immediately after Pearl Harbor those arrangements were amplified and adapted to the problems of a world-wide battle against the submarine.[94] The situation was thoroughly reviewed again at the Atlantic Convoy Conference which was held in Washington in March 1943. The controlling factor during the early part of the war was the shortage of escort vessels, and all planning was conditioned by that circumstance. Availability of escorts determined the number and the size of the convoys that could be organized, hence the extent to which vessels would run independently and rely on diversive routing for protection. The subject of convoying and routing is an exceedingly broad one, and the story properly belongs to the Navy.[95] This section will review only certain features which were of special concern to the Army.

Though the Navy had done some escorting prior to Pearl Harbor in both the Pacific and the Atlantic, these were scattered and minor operations compared with the task which was to be undertaken as soon as the United States entered the war, and the details of an adequate system had to be worked out step by step. During December 1941 and January 1942 each convoy was set up by special arrangement between the Army and the Navy. The most urgent Army responsibility was the dispatch of troops and supplies to Hawaii. The San Francisco Port of Embarkation made extraordinary effort to get two vessels ready to sail to Honolulu on 13 December, only to find that the Navy was not prepared to provide escorts until two days later.[96] A Navy announcement that it would be able to escort only one convoy from San Francisco to Australia during January necessitated a revision of Army troop movement plans, with the result that the departure of the first contingent was delayed.[97] G–4 objected to holding certain fast freighters, loaded with supplies urgently needed in Australia and the Caribbean, for uncertain convoy sailings and arranged that the Navy waive its requirement and permit the vessels to sail unescorted, contending that the risk was warranted under the circumstances.[98] At Navy request the Army

[93] Joint Basic War Plan, RAINBOW 5, Sec. VII, pars. 30a and 35c, JB 325 (Ser 642–5), Incl A, 30 Apr 41; ABC–1, An. V, U.S.-British Stf Convs, Washington, ended 27 Mar 41.

[94] Memo, Secy for Collaboration USN for Chief Stf Off British Naval Stf, Washington, 22 Dec 41; USN Memo, 22 Jan 42, sub: Routing Merchant Vessels in Areas under Strategic Contl of U.S.; Atlantic Convoy Conf, 1–12 Mar 43. All in OCT HB Topic Convoy and Routing.

[95] See History of Convoy and Routing, typescript first draft narrative, signed by Rear Adm Martin K. Metcalf, USN (Ret), Dir of Convoy and Routing, May 45, prepared under general supervision of the Dir of Naval History; also Samuel Eliot Morison, *The Battle of the Atlantic, September 1939–May 1943* (Boston, 1947).

[96] Memo, ACofS G–4 for CofS USA, 12 Dec 41; Memo, CofS USA for Admiral Stark USN, 13 Dec 41. Both in OCS 21276–21350. G–4 complained that the Army's need was subordinate in this case to a less urgent Navy need for escorts.

[97] Memo, C of Trans Br G–4 for ACofS G–4, 26 Dec 41, sub: Conf with Navy, OCT HB Topic Convoy and Routing.

[98] Memo, ACofS G–4 for CofS USA, 14 Jan 42; Memo, C of Trans Br G–4 for CO's of ports, 30 Jan 42, sub: Release of Slow and Fast Freighters. Both in OCT HB Topic Convoy and Routing.

combined a troop movement from New York to Australia and New Caledonia, scheduled to sail 20 January, and one from Charleston to Bora Bora, scheduled to sail 25 January, as a measure of economy in the use of escort vessels.[99]

At this period G–4 was responsible for making convoy arrangements with the Navy, and the incumbent chief, General Somervell, protested when the Chief of Staff authorized GHQ to deal directly with the Navy in connection with movements to Iceland and North Ireland.[100] Somervell contended that since G–4 arranged for the transports and controlled the ports at which the vessels were loaded, it was in the best position to work out the details regarding convoys. General Marshall accepted that point of view.

The Navy repeatedly emphasized that movements must be kept within the escort possibilities.[101] Late in January 1942 Admiral King protested to General Marshall that his office was being embarrassed by requests for convoys made without sufficient advance notice. Upon being informed that the Army would notify the U.S. Naval Shipping Control Officer as promptly as possible of any changes in schedules or additional movements, Admiral King replied that the Navy was "unable to provide escorts ad lib," and that it would participate in preparing schedules which could be maintained as soon as the current "flurry" had subsided. In another protest, filed a few days later, Admiral King stated that he could not accept the premise that it was the Navy's business to furnish escort for any troopship sailing that the Army might set up, when the plan was made without co-ordination with the Navy. G–4 took the position that it merely had stated what escorts were wanted and expected the Navy to indicate whether they could or could not be furnished; it noted that the Navy thus far had provided the escorts requested without much delay.[102] Admiral King then was informed that the Army would endeavor to conform to any plan of co-operative action that the Navy might propose. The Navy requested one month's notice of the Army's need for a convoy, whenever that was possible.

By mid-February 1942 the Navy had worked out a plan for convoys on the principal routes, which provided one sailing every 40 days to the United Kingdom, Iceland, Greenland, and Newfoundland; one sailing every 30 days to Bermuda, the Caribbean, South America, Australia, and the islands of the Pacific ferry route; 6 sailings monthly to Hawaii.[103] The plan contem-

[99] Memo, CNO USN for CofS USA, n.d., sub: Convoy for BOBCAT and Australia; Memo, Gross for Ross (Trans Br G–4), 15 Jan 42. Both in G–4/29717–115.

[100] Memo, ACofS G–4 for CofS USA, 1 Jan 42, sub: Liaison with Navy, with approval by GCM, G–4/29717–89. For establishment of GHQ and relationship to WDGS see Kent R. Greenfield, Robert R. Palmer, and Bell I. Wiley, *The Organization of Ground Combat Troops*, in UNITED STATES ARMY IN WORLD WAR II: THE ARMY GROUND FORCES (Washington, 1947), Chs. I, IX, X.

[101] Memo, CofS USA for ACofS G–4, 27 Jan 42, sub: Notification of Army Convoys, G–4/29717–89; Memo, ACofS G–4 for CofS USA, 28 Jan 42, forwarded to Admiral King, G–4/29717–89; Memo, Admiral King for General Marshall, 30 Jan 42, OCT 045.4 G–4 file Jan–Feb 42; Memo, King for Marshall, 7 Feb 42, OCT HB Topic Convoy and Routing.

[102] Memo, ACofS G–4 for CofS USA, 9 Feb 42, sub: Admiral King's Note on Escorts, G–4/29717–89; Memo, Marshall for King, 10 Feb 42, 21343–18, OCS 21276–21350; Memo, COMINCH for CofS USA, 9 Feb 42, sub: Escorts in Atlantic, G–4/29717–89.

[103] Memo, Marshall for King, 21 Feb 42, sub: Navy Escorts for Army Transports, 21343–19, OCS 21276–21350; Memo, King for Marshall, 24 Feb 42, OCT HB Gross Day File.

plated that cargo vessels would sail unescorted unless they had sufficient speed to accompany troopship convoys; that troopship convoys would have a speed of at least 15 knots; and that high-speed troop transports would sail unescorted but with offshore air coverage. The Army commented that this convoy schedule placed a severe limitation on the oversea war effort. It requested that the 40-day intervals be reduced to 30 if possible; that the convoy speed limitation be placed at 13 knots in the Pacific and 14 knots in the Atlantic in order that the slower troopships might be included; and that convoy arrangements be developed for Alaska. The Army accepted other features of the Navy plan, with the understanding that it was subject to revision in the light of experience and that the Navy would keep the Army informed as more escorts became available. The Navy indicated that it was not then able to go far in complying with these requests but would co-operate to the fullest extent possible in meeting the Army's transportation problems.

Thenceforward there was a running exchange of information between the two services and an effort toward closer coordination, the Army always pressing for more frequent convoys, the Navy adjusting its plans to meet the Army's needs as far as possible but urging that requests for special movements be kept to a minimum. Late in March 1942 Admiral King called attention to the special convoys which had been arranged for that month, and, while acknowledging that the movements in question were of highest priority, stated: ". . . this sort of thing cannot go on—we simply have not the means to escort multifarious expeditions." [104] The Army response, prepared by General Gross for General Marshall's signature, stated that every effort would be made to reduce the demand for convoys and added that a better liaison and a better understanding of each other's problems were developing between the two departments.

By summer, 1942, the weakness of the Japanese submarine threat had become apparent, and convoys in the Pacific were limited to scheduled sailing between San Francisco and Honolulu and irregular sailings into the forward areas. Later, convoys to Honolulu were discontinued; they were revived briefly in 1944 after a submarine scare and then abandoned altogether. In May 1945 vessels in the Pacific were being permitted to run independently as far west as Kossol Passage, about 750 miles southwest of Guam.[105]

In the Atlantic, on the other hand, there was a steady increase in convoy operations as rapidly constructed escort vessels came off the ways in greater and greater numbers. After taking severe losses during the early part of 1942 in the western Atlantic, the Gulf of Mexico, and the Caribbean, sufficient escorts became available to enable the Navy, with the aid of air patrols, to provide effective protection for merchant vessels moving in those waters. Increasingly frequent schedules of fast (14–15 knot) and slow (8–10 knot) convoys were required to effect the build-up of U.S. forces in the United Kingdom and to support the Allied campaigns in North Africa, the Mediterranean, and eventually on the European Continent. Up to V-E Day 1,134 principal

[104] Memo, King for Marshall, 23 Mar 42; Memo, Marshall for King, 27 Mar 42, sub: Navy Escorts. Both in OCT HB Gross Day File.

[105] History of Convoy and Routing, pp. 97–98; Memo, Lt Col Meyer for Lt Col Finlay, 4 Sep 43, OCT HB Topic Convoy and Routing; TC News Letter, 15 Nov 44, OCT HB Topic Convoy and Routing; Memo, CofT for CG ASF, 17 May 45, ASF Hq Trans 1945.

convoys were escorted by the combined American-British-Canadian naval forces in the North and Middle Atlantic.[106] These convoys involved 47,997 merchant vessels and 8,233 escort vessels, or an average of 42.3 merchantmen and 7.3 escorts per convoy. The peak year was 1944 when 380 convoys sailed, including 18,856 merchant ships and 3,070 escorts. There were, in addition, less frequent convoy sailings between U.S. Atlantic and Gulf ports and South America, the Middle East, and other areas.

During the critical part of the war, when German submarines were a constant threat, all vessels crossed the North and Middle Atlantic in convoys except those freighters which were too slow to keep up with the slow convoys and except fast ships of 19 or 20 knots sustained speed which could outrun the U-boats.[107] Late in the war independent routing was the rule for tankers of all speeds and a greater number of freighters were permitted to run free, but all troopships except the more speedy ones continued to sail with escort. The fast convoys, which included the troopships, were kept small in the interest of security, and they seldom exceeded 24 vessels.[108] The largest slow convoy to sail during the war consisted of 167 merchant vessels destined to the United Kingdom. Of this total, 109 were loaded at and sailed originally from United States ports, and 58 originated at Canadian ports.

The troopships which sailed unattended in the Atlantic were, with a few exceptions, prewar passenger liners which had been converted for troop service. They included the largest and fastest American and British vessels, as well as several French, Dutch, and former Italian vessels which had come under American or British control. Although they ran without escort in the open ocean, they were given special protection in coastal waters.[109] Not a single ship of this fast group was lost in the Atlantic as the result of enemy action—an accomplishment attributable to close teamwork between American, British, and Canadian officials, accurate information regarding U-boat activities, careful control of routings and diversions, and skillful seamanship.

Outside the North and Middle Atlantic, although protected convoys were employed wherever and whenever the danger was great and escorts were available, independent routing was used extensively. Sometimes such routings involved wide diversions and greatly lengthened voyages. For example, increased submarine concentrations in the South Atlantic in the latter part of 1942 caused more than 200 vessels bound from U.S. east coast ports to the Indian Ocean to be sent through the Panama Canal, down the west coast of South America, and around Cape Horn. When U-boats became active in the area off Capetown, such vessels were diverted to the

[106] History of Convoy and Routing, pp. 59–60, 100–102.

[107] In March 1942 proposal by General Somervell to permit 1,000 U.S. troops to sail for Ireland on an unescorted British ship of 19 knots was vetoed by General Marshall. Memo, CG SOS for CofS USA, 13 Mar 42, sub: Carrying Trs in SS *Carnarvon Castle*, OCT HB Gross Vessels—British. Later some troopships of 19 knots were permitted to run independently in the North Atlantic.

[108] Memo, Port Dir Third Naval Dist for CG NYPE, 18 Nov 48, sub: Convoy Arrangements, OCT HB Topic Convoy and Routing; History of Convoy and Routing, p. 73.

[109] Ltr, Admiral E. J. King USN to Admiral Andrew Cunningham RN, 10 Oct 42, ASF Hq Navy 1942–44; Memos, COMINCH for Comdr ESF, 23 Oct 42 and 2 Dec 42, sub: Escort of British and U.S. Fast Transports, OCT HB Gross Navy; CCS 93d Mtg, Item 5, 22 May 43; CCS 94th Mtg, Item 3, 23 May 43; CCS 246, 23 May 43; History of Convoy and Routing, pp. 94–96.

longer route across the South Pacific and around New Zealand and Australia. More than 500 vessels were routed in this manner prior to the opening of the eastern Mediterranean to Allied shipping in July 1943.[110]

Any comparison of losses as between escorted and unescorted ships would involve a more detailed analysis of the data than can be undertaken here, but the following figures are of interest.[111] From September 1939 to the end of the war, of a total of 4,786 Allied and neutral merchant vessels of 1,000 gross tons or more lost on account of enemy action, 2,115 were lost while proceeding independently, 1,266 while in convoy, 318 while proceeding as stragglers from convoys, 367 after being detached or dispersed from convoys, and 720 during military operations at anchor or in port. During 1939–42 many more vessels were lost while proceeding independently than were lost in convoy, but thereafter the losses in convoy were somewhat the greater.

The campaign in North Africa, the first large-scale Allied operation of the war and one calling for heavy and carefully scheduled movements of troops and supplies, brought to light many problems in connection with the organization and operation of convoys. A study made in General Gross's office of the convoys which sailed to that theater during the winter of 1942–43 presented a disturbing picture of ship failures, collisions, and other mishaps that resulted in loss of ships' services and delay in the delivery of troops and cargoes overseas.[112] Gross immediately launched a vigorous campaign to place all Army transports in proper mechanical condition for operation in convoy and to avoid faulty stowage which might result in the shifting of cargoes at sea, and he requested the War Shipping Administration to undertake similar measures in regard to vessels operated under its control. He also urged the Navy to exercise close supervision to insure that each vessel assigned to a convoy was mechanically fit for the voyage and capable of maintaining the scheduled speed.

This action had scarcely been taken, however, when more misfortune was reported.[113] Analysis of a convoy immediately after its sailing from New York on 1 April 1943 disclosed that of a total of 51 cargo ships and tankers which had been loaded for the departure, 6 had been eliminated while getting under way in a heavy mist—5 because of collisions and 1 because of getting lost. Later information revealed that other vessels which had sailed with the convoy had returned to port because of damage resulting from collisions and still others had gone astray in the fog. As a result, more than 20 percent of the cargo loaded had not gone forward. In addition to this delay of supplies actually put aboard, two vessels intended for the convoy had been eliminated before they reached the loading port, one because of collision and the other because of machinery trouble. Further consultations with the Navy were immediately begun.

[110] History of Convoy and Routing, pp. 36–40.

[111] British Admiralty Rpt, BR 1337, *British and Foreign Merchant Vessels Lost or Damaged by Enemy Action during Second World War,* 1 Oct 45, p. 19.

[112] Memos, General Marshall for Admiral King USN and Admiral Land WSA, 30 Mar 43, sub: Losses in Effective Use of Shipping, and atchd tabulation, OCS 570, 1943; ASF MPR, Sec. 3, 31 Mar 43, pp. 70–74.

[113] Memo, CofT for CG ASF, 2 Apr 43, sub: Sailing of Convoy UGS-7, OCT 045.4 UGS Memos, Marshall for Land and King, 3 Apr 43, OCS 570, 1943; Memo, CofT for CG ASF, 3 Apr 43, sub: Effect of Fog and Collision upon UGS–7, OCT HB Gross WSA; Memo, Marshall for King, 9 Apr 43, ASF Hq Navy 1942–44. "UGS" designated slow convoys, "UGF" fast convoys, from U.S. ports to Gibraltar.

While attributing the misfortune which befell this convoy largely to fog, the Navy cited it as "another example of crowded conditions in New York" and as a strong argument for moving some of the convoys to other ports.[114] Further measures recommended by the Navy were the better maintenance of machinery, the assignment of the best qualified masters to ships sailing in convoy, and limitation of the size of convoys. The Army replied that the size of convoys could not be reduced until more escorts were available and more frequent sailings possible; it pointed out that the Army already was loading vessels at Boston, Baltimore, and Hampton Roads and would soon begin loading at Philadelphia but that, as long as the ships had to assemble at New York for convoy sailings, outport loading offered no relief so far as this particular problem was concerned; and it suggested that in addition to investigation by the Naval Inspector General, a joint review of the whole problem be made.[115] As the result of conferences on this subject and discussion in the Joint Chiefs of Staff, coastwise convoys were soon established between Boston and Halifax, an arrangement which enabled vessels loading at Boston to join an Atlantic convoy at Halifax rather than at New York, and the slow North African convoys were shifted from New York to Hampton Roads.[116]

Although the Combined and Joint Military Transportation Committees necessarily concerned themselves with convoy matters, the determination of the size and frequency of convoys remained a naval prerogative. In February 1943 a proposal to increase the size of the slow convoys to North Africa above the existing limit of 60 vessels, while strongly supported by General Gross, was opposed by the Navy.[117] In May, as the result of continued pressure from both American and British sources for an increased movement of cargo to North Africa, CMTC recommended that the Navy's limit of 60 vessels be raised at once to 80 and that, beginning in midsummer, convoy departures be increased from one every 15 days to one every 10 days. Admiral King, while recognizing the urgency of the need, stated that the first proposal could not be carried out because of the shortage of escorts and that the second proposal, although tentatively approved, might be found impossible of accomplishment. However, the Navy, which had sole responsibility for escorting U.S.-North Africa convoys as far as Gibraltar (where they were taken over by the British Admiralty), was able to raise the limit to 80 vessels beginning with UGS–13 which sailed in July 1943, and it soon increased the frequency to once very 10 days.

As the time approached for the sailing of UGS–16 (U.S.-Gibraltar slow convoy), it was disclosed that a total of 91 vessels had been presented for inclusion by the U.S.

[114] Two Memos, King for Marshall, 5 Apr 43; Memo, Admiral Edwards for General Somervell, 5 Apr 43. All in OCT HB Gross Navy.

[115] Memo, Marshall for King, 9 Apr 43, ASF Hq Navy 1942–44; Memo, Marshall for King, 21 May 43, OCS 570, 1943. For report of NIG and resulting actions by Navy and JMTC, see JMT 23/D, 27 May 43, and JCS 352, 8 Jun 43.

[116] Memo, King for Marshall, 18 Apr 43, OCT HB Gross Navy; Memo, Dir NTS for CofT, 16 May 43, sub: Use of Boston as Convoy Loading Port, OCT 565.2 Boston Geog File; Memo, Admiral Edwards for CofT, 20 Jun 43, OCT 045.4 Gen; JCS 352, 8 Jun 43.

[117] Memo, CofT for Secy CMTC, 26 Jan 43, OCT HB Meyer Staybacks; CCS 182, par. III–1(a) of Incl, 25 Feb 43; CCS 222, 14 May 43; CCS 222/1, 2 Jun 43; Rad to British Admiralty, 21 Jul 43, WD CM–IN 15169, OCT 045.4 Navy; CCS 222/5, 20 Sep 43; CCS 120th Mtg, 24 Sep 43, Supp. Min, Item 5.

Army, the War Shipping Administration, and the British Ministry of War Transport. It then became a question of again raising the limit or of establishing priorities under which some vessels would be eliminated from the convoy.[118] An *ad hoc* committee, appointed by the Combined Military Transportation Committee to consider the subject, recommended a basis for priorities, proposed that after priorities had been established by the Combined Chiefs of Staff the enforcement of them be delegated to CMTC, and suggested that the Navy be requested to fix the earliest possible date for increasing the frequency of UGS convoys to four per month. In a JCS discussion of this report Admiral King expressed concern regarding the extent of activity of the *ad hoc* committee, but was satisfied with the assurance of General Somervell, who was a member of that committee, that it intended to deal only with priorities and not with the size and other operational aspects of convoys. The report of the *ad hoc* committee was approved by CCS.

When the question of permitting more vessels to proceed independently was taken up in the Combined Military Transportation Committee during the summer of 1944, the Navy again displayed opposition to any qualification of its responsibility for the protection of merchant shipping. The British Admiralty had suggested the possibility of saving shipping by making the convoy system more flexible and releasing ships from the necessity of proceeding in slow convoys when there was no enemy threat in the area where they were operating.[119] A Navy spokesman pointed out that economy also involved prevention of unnecessary losses and expressed the view that if such a practice were initiated there would be great difficulty in keeping it within bounds. Upon suggestion of General Gross, who felt that the proposed flexibility might apply to the faster cargo vessels operated on transatlantic voyages as well as those in the western Atlantic, a subcommittee was appointed to review the situation. Soon thereafter Gross was informed by a Navy spokesman that Admiral King did not regard the charter of CMTC as giving it authority to look into his convoy and routing policy and that the subcommittee was distinctly *persona non grata* with him.[120] At the next meeting of CMTC the Navy representative requested that the subcommittee be dissolved, and this action was taken.

The numbers of passengers that might be carried on escorted and unescorted vessels were fixed by the Navy, but the Army's views were taken into consideration.[121] The Army's position was influenced naturally by the urgent need for troop lift, and consequently the Army favored taking advantage of any space that could be used without excessive hazard. The problem was a complicated one, involving not only questions of route, speed, and escorts, but also the question of lifeboat capacity and distinctions between service and nonservice personnel. Co-ordination with the British

[118] CMTC, 68th Mtg, 19 Aug 43; Memo, EM Jr for Gen Somervell, 19 Aug 43, ASF Hq Trans 1943; CCS 222/2, 20 Aug 43; CCS 222/3, 22 Aug 43; JCS 111th Mtg, Item 11, 23 Aug 43; CCS 116th Mtg, Item 4, 24 Aug 43.

[119] CMTC, 89th Mtg, Item 1, 16 Jun 44; CMTC, 90th Mtg, Item 1, 1 Jul 44.

[120] Memo, Admiral W. W. Smith for General Gross, 13 Jul 44, OCT HB Gross Navy; CMTC, 91st Mtg, Item 1, 14 Jul 44.

[121] Memo, Admiral Edwards for CofT, 18 Jul 42, ASF Hq Navy 1942–44; Memo, CofT for Admiral Edwards, 5 Aug 42; Memos, CofT for Deputy CofS USN, 23 Nov 42 and 14 Feb 43. Last three in OCT HB Meyer Staybacks.

concerning rules applicable to the respective areas of responsibility was necessary. Because of changing conditions the rules were in a state of flux throughout the war.

The convoy system imposed numerous problems on the Transportation Corps, particularly in connection with the large cargo convoys in the Atlantic. The assembling of so many vessels in port at one time not only intensified the hazards of navigation but caused loading, repairing, and supplying operations to be concentrated in certain periods, with resulting pressure on the personnel and facilities concerned. The Army ports of embarkation carefully scheduled their loading operations, taking into account the convoy sailing dates, the availability of pier facilities, and the adequacy of labor, and the Chief of Transportation undertook to arrange with the War Shipping Administration, which provided most of the vessels, to have them delivered promptly in order that the schedules might be maintained.[122] Delayed arrivals due to submarine activity, unforeseen repairs, and other causes frequently prevented WSA from making deliveries as planned. If the vessels so delayed were numerous, decision whether to eliminate them or hold the convoy was made after consultation between the Transportation Corps, which had knowledge of the theater's cargo requirements, and the Navy, which knew the general convoy and escort situation. Army port commanders were urged to begin loading vessels promptly and to proceed as rapidly as possible, even though the convoy sailing date allowed more than enough time, because of possible interruptions due to weather, labor shortage, or other unforeseen circumstances. The matter of getting up to a half million tons of cargo to the seaboard in sufficient time to complete the loading of a convoy, but without port congestion and in accordance with priorities established by the theaters, required careful planning and strict control on the part of the Transportation Corps.[123]

For several months after General Gross was designated Chief of Transportation in March 1942, the Army's arrangements with the Navy regarding convoys were made by his Operations Officer. In June 1942, convoy procedures having become somewhat stabilized, the Navy was informed that although long-range schedules still would be co-ordinated by the Operations Officer (later known as Director of Operations), the final and detailed arrangements thereafter would be made by the chief of the Water Division.[124] The latter official found it convenient to utilize the Transportation Corps' permanent liaison officer with the Navy as his agent in negotiations with the convoy and routing section. That procedure continued throughout the war so far as cargo convoys were concerned. Troopship convoys eventually became the special interest of the Movements Division, which

[122] Memo, BPE for OCT, 15 Oct 43, and subsequent correspondence illustrates scheduling plan used at Boston, OCT 565.2 Boston Geog File.

[123] See summary of cargo shipped to North Africa up to UGS-12, in binder labeled Miscellaneous Shipping Information, p. 75; see also analysis of certain convoys, pp. 63-70, OCT HB Plng Div Gen; see also file OCT HB Wylie UG Convoys.

[124] Memo, Opns Off OCT for Dir NTS, 7 Jun 42, sub: Arrangements for Escorts, OCT HB Meyer Staybacks; C of Water Div OCT for Dir NTS, 8 Jun 42, OCT HB Topic Convoy and Routing; Memo Convs, author with Maj W. E. Nowell, formerly with Ocean Traf Br of Water Div, and Lt Col H. H. Naughton, formerly C of Convoy and Scheduling Br of Mvmts Div, 6 May 48, OCT HB Topic Convoy and Routing.

as a rule made its arrangements directly with the appropriate Navy officials.[125]

While the basic arrangements were made in Washington, details pertaining to the organization and dispatch of convoys were worked out by the Navy port directors in conjunction with the Army port commanders and the local representatives of the War Shipping Administration and the British Ministry of War Transport.[126] Army port commanders were responsible for seeing that the masters and chief radio operators of vessels under Army control attended the meetings held by the Navy port directors prior to convoy sailings, at which instructions regarding operations and information for their guidance were given.[127]

There is abundant evidence from the Army standpoint that after the shortage of escort vessels had been overcome and the procedures for organizing and escorting convoys had been improved through experience, the Navy's convoy system worked smoothly and effectively.[128] In short, the Navy made every effort to meet the Army's requirements, within the limitations imposed by the means at its disposal and its technical standards.

[125] The Director of Operations and his staff had a key position in convoy matters throughout the war, and in recommending Col. Richard D. Meyer, Deputy Director of Operations, for Legion of Merit General Gross cited his outstanding service in this connection. See Memo for TAG, 19 Feb 45, OCT HB Wylie Staybacks.

[126] Memo, Asst Navy Port Dir NY for Hist Off NYPE, 18 Sep 42; Telg, CofT for Army port comdrs, 28 Mar 43. Both in OCT HB Topic Convoy and Routing.

[127] Memo, CofT for Army port comdrs, 11 Mar 43, OCT 045.4 Navy.

[128] Memo, CofT for COMINCH, 11 Feb 44, sub: Commendation—Comdr W. R. Edsall, and Ind by Gen Somervell, OCT HB Meyer Staybacks; OCT HB Monograph 30, p. 171; Convs, author with Nowell and Naughton, cited n. 124.

Relations with the British Ministry of War Transport

The necessity of pooling American and British shipping was recognized as soon as the United States entered the war. A report of the Joint U.S.-British Planning Committee to the heads of the two governments, at the beginning of their conferences in Washington in December 1941, stated: "No major overseas operations can be performed by the United States unless adequate shipping is immediately made available for preparation as troop transports."[129] Although the most urgent immediate need was for vessels with which to reinforce the Southwest Pacific, it was realized that long-range planning was necessary in order that the fullest combined use of shipping for all purposes might be obtained.

Ocean transport unquestionably was one of the major "services" contemplated for exchange under the British Master Agreement which was executed on 23 February 1942 to implement the Lend-Lease Act of 11 March 1941.[130] It was a two-way exchange from the beginning, each side contributing vessels which were physically well-adapted or suitably located to fulfill specific requirements in a common cause. In this exchange the British gave the more heavily of troop-carrying capacity, because of the

[129] ARCADIA Proceedings, An. 1, p. 2, 26 Dec 41; CMTC 3d Mtg, Item 9, 3 Mar 42.

[130] The President's *Seventh Report to Congress on Lend-Lease Operations,* App. V, Arts. I and II, December 11, 1942. After extensive negotiations regarding a troop transport loaning agreement the U.S. and British Governments decided early in 1943 not to enter into formal agreement but to allow the principles of reciprocal aid to be worked out as occasion might require. See communications, British Embassy Washington to Secy State, 9 Feb 43; Secy State to SW, 1 Mar 43; SW to Secy State, 12 Mar 43. All in OCT 092.2 Loan of Troop Transports.

assignment of their largest passenger liners to the service of the U.S. Army in the North Atlantic, and the United States gave the more heavily of cargo-carrying capacity, by virtue of its tremendous freighter and tanker construction programs. In addition to transportation, the lend-lease and reciprocal aid (reverse lend-lease) agreements covered all expenses, except pay and allowances to crews, incurred by vessels of either nation in the ports of the other nation, or in other approved areas.[131] Under the so-called knock-for-knock agreement each government waived all claims against the other on account of loss or damage of vessels or cargo due to the acts of the other government or its agents.[132]

The American pool of ships which functioned under the control of the War Shipping Administration and the British pool under the control of the British Ministry of War Transport included many vessels of other nationalities. Germany, which had substantially aided the Allies in World War I by allowing many of her best ships to be interned in United States ports at the outbreak of hostilities, was careful not to make a similar mistake in September 1939. Italy and Japan also arranged to have the bulk of their merchant shipping in safe ports or on the high seas when they entered the war. But a substantial part of the French, Belgian, Dutch, Danish, Norwegian, Polish, and Greek merchant marines escaped Axis seizure when those countries were invaded, and served the cause of the United Nations thereafter, mostly under British control.[133] Victory in North Africa brought additional French shipping under Allied control. When Italy surrendered, a limited number of vessels which had escaped complete destruction while in Axis service, or had been interned in neutral ports, became available. The small amount of German shipping which was afloat when that nation capitulated was acquired by the Allies, but too late to be of use in the war against Japan.

The extent of the assistance which the United States should receive from the British shipping pool and the amount of shipping aid which the British should receive from the United States were matters which received constant attention from the Combined Shipping Adjustment Board, a civilian agency concerned with all aspects of the subject, and the Combined Military Transportation Committee, concerned primarily with military movements. The utilization of shipping invariably was considered at the conferences between the President and the Prime Minister, at which the above agencies were represented. There frequently were differences of opinion between the

[131] Rad, International Div ASF to oversea commands, 8 Feb 44, CM–OUT 4488; Memo, TAG for CG's of Theaters, etc., 16 Jun 44; AG 400.3295 (13 Jun 44), sub: Services Furnished for Army Transports as Reciprocal Aid in British Colonial Ports and other Approved Areas. Last two in OCT 120 Reverse Lend-Lease, Sec. 2.

[132] Agreement between the Government of the United States of America and the Government of the United Kingdom of Great Britain and North Ireland, 4 Dec 42, OCT HB Topic British Shipping. For negotiations leading up to this agreement, see OCT files 092.2 Loan of Troop Transports, 092.2 Knock for Knock—England, 092.2 Knock for Knock—Misc. Similar agreements were made between the U.S. and other United Nations.

[133] Study prepared by Div of Economics and Statistics, U.S. Mar Com, as of 30 Sep 42, published in ASF MPR Sec. 3, Dec 42, pp. 15–27, indicates that of 25,790,000 DWT of shipping under direct British control, 6,165,000 DWT were of foreign flag, including 2,700,000 DWT Norwegian, 1,450,000 DWT Dutch, and 1,025,000 DWT Greek; of 14,383,000 DWT under U.S. control, 2,000,000 DWT were of foreign flag, including more than 1,000,000 DWT Panamanian and 350,000 DWT Dutch.

civilian and the military authorities, or between the British and the American representatives, and final decision rested with the heads of the two governments. Such decisions seldom were arrived at easily since both sides were plagued with shortages, but through a free exchange of information it generally was possible to find what seemed to be the most practical adjustment in the interest of the Allied war effort.

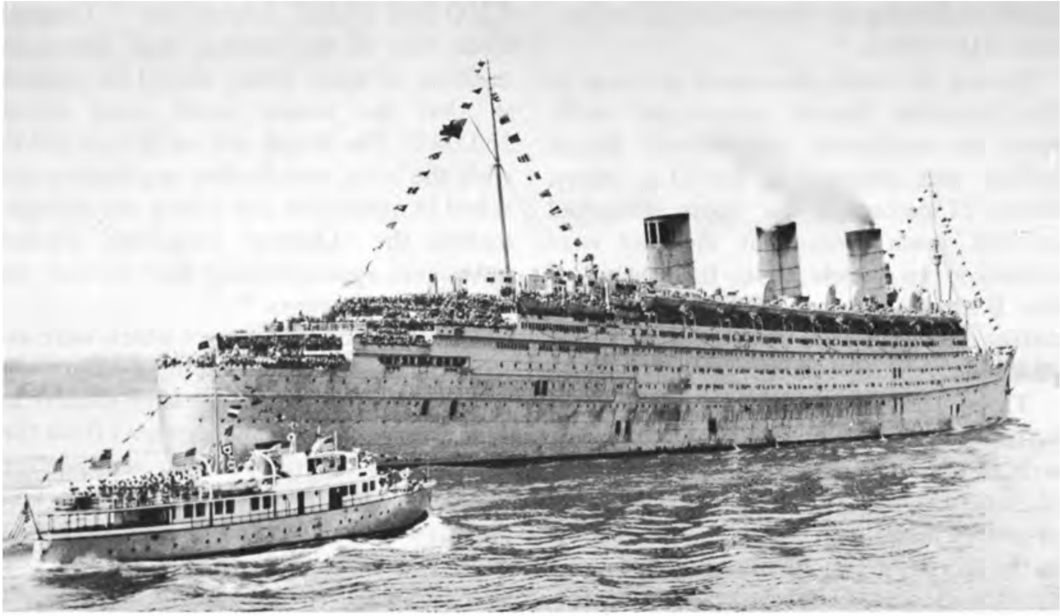
The most persistent difference of opinion was over the shipping requirements of the British import program, which were partially met with American vessels. Although that program had been severely cut, American representatives on the Combined Military Transportation Committee repeatedly pressed for further withdrawals of shipping in order that the vessels might be assigned to strictly military missions.[134] This lengthy argument was highlighted by a misunderstanding at the Casablanca Conference in January 1943, when an agreement between General Somervell and Lord Leathers, Minister of War Transport and British member of the London branch of the Combined Shipping Adjustment Board, which the former understood to assure additional vessels for forthcoming American military undertakings, was found to be without "a complete meeting of minds," so that the entire situation had to be reviewed after the conference.[135]

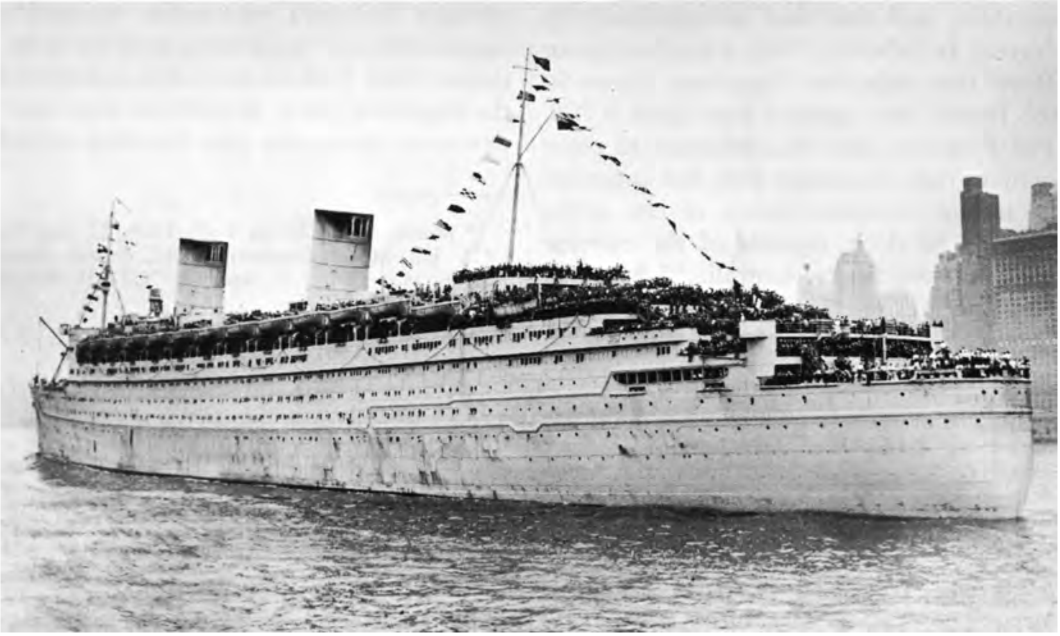
The more exacting problems in connection with this combined use of shipping concerned troop transports, particularly the larger and faster vessels which ran without escorts and were moved freely from route to route according to the urgency of the needs. Among the vessels of this type in the British pool were the British liners *Queen Mary*, *Queen Elizabeth*, *Aquitania*, *Mauretania*, *Empress of Scotland*, and *Andes*, the French *Ile de France* and *Pasteur*, and the Dutch *Nieuw Amsterdam*. Among the larger American troop carriers were the Navy-operated *West Point*, *Wakefield*, *Mount Vernon*, *Monticello*, and *Hermitage*; the Army-operated *George Washington* and *Edmund B. Alexander*; the *Argentina*, *Brazil*, *John Ericsson*, *Lurline*, *Mariposa*, *Monterey*, and *Uruguay*, which were operated by agents of the War Shipping Administration; and the war-built, Navy-operated "Admirals" and "Generals" (P–2 type).[136] The Movements Division in the Office of the Chief of Transportation and the British Ministry of War Transport maintained a running exchange of information regarding the scheduling of these and other troopships, and kept each other fully informed regarding prospective changes of sailing dates, changes in space requirements, lay-ups for repairs, and other

[134] CCS 74th Mtg, Item 2, 5 Mar 43; CMTC, 61st Mtg, Item 1, 15 Mar 43; Memo, Gross for Marshall, 17 Mar 43, sub: Review of UN Shipping, OCT HB Wylie Shipping Requirements and Allocations 1943; CMTC, 93d Mtg, Item 1, 12 Jan 45; Memo, CG ASF for CofS USA, 30 Mar 45, sub: CCS 746/13, OCT HB Gross Day File; CCS 746/14, 3 Apr 45; see also Memo, Harry Hopkins for Lewis W. Douglas WSA, 28 Apr 43, OCT HB Gross WSA; Ltr, WSA to CofT, 2 Oct 44, OCT HB Gross WSA; Ltr, Acting SW to Secy State, 16 Dec 44, ASF Hq British 1944. For British view see Hancock and Gowing, *British War Economy* pp. 428–35.

[135] Ltr, CofT to WSA, 27 Feb 43, OCT HB Gross WSA; Ltr, Sir Arthur Salter, British member of CSAB in Washington, to CG SOS, 9 Mar 43, and Reply, 12 Mar 43, ASF Hq British 1942–43; Ltr, WSA to CofT, 13 Mar 43, OCT HB Gross WSA; Memo, CofS USA for Harry Hopkins, 22 Mar 43, OCS 570, 1943.

[136] Troops Transports in Service (British Doc), 30 Sep 45, OCT HB Mvmts Div British Files; Troop Ships by Speed Class, 8 Nov 43, prepared in Mvmts Div OCT, OCT HB PE Gen Transport Lists.





LARGEST TROOPSHIPS AFLOAT. *The* Queen Mary *(top) and* Queen Elizabeth *(bottom), operated under the control of the British Ministry of War Transport, carried between 14,000 and 15,000 troops on each of many trips.*

matters affecting the movement and utilization of the vessels.[137]

During the heavy movement of troops to the European theater almost the entire space on eastbound transatlantic British sailings was assigned to the U.S. Army. About 21 percent of the troops embarked at U.S. ports throughout the war were embarked on vessels under the control of the British Ministry of War Transport; during the year 1944 the percentage was 28.2.[138]

The *Queen Mary* and the *Queen Elizabeth,* because of their great size and speed, were of utmost importance in the movement of American troops. After a brief period of service in the Pacific, they served mainly in the North Atlantic despite the submarine menace. General Gross naturally was desirous of having them carry the maximum numbers, and this was accomplished by degrees. In February 1942, when the *Queen Mary* first embarked American troops in the Pacific, her capacity was about 8,200. The President then was reluctant to place so many men on a single ship, but approved an urgent recommendation of the Army that this be done, because of the extreme need of troop lift to Australia.[139] By April the capacities of the *Queen Mary* and the *Queen Elizabeth* had been increased to 9,500 and 10,500, respectively.[140] General Gross was of the opinion that American methods of troop fitting should be applied so that the vessels could carry about 15,000.[141] The British did not at once fall in with the idea, but further negotiation resulted in agreement and during the summer months the "Queens" frequently carried passengers approximating that number on transatlantic voyages.[142]

Vessels of the British pool which were assigned to the transportation of American troops were inspected in the same manner as American troopships by personnel from the Army ports of embarkation, representing the Port Inspector, the Port Surgeon, and the Superintendent of the Army Transport Service (later called the Water Division).[143] The U.S. Coast Guard, which was charged with enforcement of the U.S. vessel inspection laws and regulations, assigned a representative to the Army port of embarkation at New York to serve as a member of the inspection team. Inspections were made as soon as practicable after the ships arrived

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[137] Much of the correspondence is in OCT HB Mvmts Div British Files; see also Memo, ACofT for CofT, 23 Apr 43, regarding use of U.S. troopships to move 17,000 British troops in convoy to Capetown, OCT HB Meyer Staybacks.

[138] Allocation List, issued periodically by British Army Staff, Washington, OCT HB Mvmts Div British Files; Monograph, Col. M. B. Stokes, Jr., Shipping in War, 22 Mar 46, p. 7, OCT HB Logistics Gen; Monthly Rpt, Mvmts Div, Classification of Outbound Passengers, Management Div OCT.

[139] Memo, CofS USA for ACofS G–4, 3 Feb 42, G–4/29717–97.

[140] Memo, CG SOS for CofS USA, 25 Apr 42, OCT HB Meyer Staybacks; Rad, British Army Staff to War Office, 27 Apr 42, OCT HB British Shipping.

[141] Memo, CofT for CG SOS, 19 Jun 42, ASF Hq British 1942–43.

[142] Memo, CG SOS for CofT, 1 Jul 42, ASF Hq Trans 1942; Notes on mtg at BMWT New York, 6 Jul 42, OCT HB Wylie British; Rad, CG SOS to CG SOS ETOUSA, 30 Aug 42, CM-OUT 9329, OCT 370.5 England; War Office Instructions, 30 Aug 45, OCT HB Mvmts Div British Files.

[143] Memo, CofT for CG SOS, 30 Jun 42, ASF Hq Trans 1942; Memo, British Army Staff for OCT (Wylie), 13 Oct 42, and Reply, 17 Nov 42; Memo, CofT for all port comdrs, 17 Nov 42, sub: Prevoyage Insp of Vessels; Memo, British Army Staff for OCT (Wylie), 11 Dec 42. Last four in OCT 333.7 Prevoyage Insp of Vessels. Memo, ACofT (Wylie) for BAS, 25 Nov 43, sub: SS *Empire Battleax,* OCT 000.900 *Empire Battleax.*

at U.S. ports, in order to allow full time for the correction of any deficiencies that might be reported, and the Chief of Transportation requested that the British Ministry of War Transport assign a representative to the inspection team with authority to take immediate action on such deficiencies.

There naturally were differences of equipment and service as between British and American troopships. These differences led to American complaints against British vessels and British complaints against American vessels. Sometimes the complaints were initiated by inspectors at the ports and sometimes by military personnel which traveled on the ships.[144] Requests for improvements following such complaints were delaying and sometimes led to unnecessary expense. Discussion of this subject in the Combined Military Transportation Committee resulted in agreement that minimum standards should be established, and a committee was appointed to study the matter. The committee listed what it considered to be acceptable conditions on American and British vessels, respectively, and recommended that when the conditions on a particular ship equalled the applicable minimum standards, they be considered satisfactory and the other nation refrain from requesting further alterations.[145] These recommendations were approved by CMTC, and accepted by the British Ministry of War Transport and the War Shipping Administration, and the resultant agreement greatly simplified this problem.

The furnishing of transportation on American and British vessels to the other nation under lend-lease and reverse lend-lease involved many questions of eligibility and procedure, particularly as regards passenger traffic, and the rules were worked out in considerable detail. The persons eligible for transportation under the mutual aid plan were defined as members of any branch of the armed forces of either government when traveling under orders, civilians operating as an integral part of such armed forces when traveling under orders, members of the merchant marine and civilian crews of vessels operated by the armed forces of either government when traveling under orders, prisoners of war and their escorts, and Red Cross personnel moving to or from service with the armed forces.[146] All U.S. Army requests for transportation on British vessels sailing from ports of the continental United States were made to the British Ministry of War Transport by the Movements Division in the Office of the Chief of Transportation.

Following the invasion of the Continent, with the liberation of the western European countries in prospect, the continued use of the shipping of those countries in support of the far-flung Allied war effort was a matter of great importance, especially to the United States because of commitments in the Pacific. In August 1944 an "Agreement on Principles," sponsored by the Combined Shipping Adjustment Board,

[144] See CMTC 77th Mtg, Item 1, 30 Dec 43; Memo, Comdr ESF for COMINCH, 16 Feb 43, OCS 570, 1943; Memo, CofT for NYPE and BPE, 24 Feb 43; 1st Ind, CofT for NYPE, 27 Oct 43; Memo, Mvmts Div OCT for Mil Pers Div ASF, 10 Nov 44. Last three in OCT HB Farr Staybacks.

[145] Rpt on Minimum Standards, 14 Jan 44, OCT HB Wylie Vessels Gen; CMTC, 82d Mtg, 18 Feb 44; CMTC, 87th Mtg, 25 May 44.

[146] Administrative Arrangement, between U.S. and UK, 22 Dec 42, OCT HB Mvmts Div Trans Under Lend-Lease; WD Memo 55–44, 29 Aug 44, sub: Ocean Trans of Pers. The rules were retroactive to the beginning of lend-lease and reciprocal aid. Transportation under lend-lease for personnel of governments other than British was available on U.S. troopships only to the members of the armed forces of such governments and civilians operating with the armed forces.

gave assurance that the shipping under the authority of the recognized governments of France, Belgium, the Netherlands, Norway, Poland, and Greece, as well as that of the United Kingdom, Canada, and the United States, would continue to be available to carry on the war in Europe and the Far East.[147]

General Gross believed that this agreement, together with an informal British-American understanding, also assured the utilization of any captured German vessels for the movement of Allied troops.[148] The matter was not finally determined, however, until the Potsdam Conference in July 1945, at which time it was agreed that the seven usable passenger vessels which had been surrendered by Germany would be employed by the United States as troopships until the end of 1945. In view of the early termination of the war against Japan and the length of time needed for the rehabilitation of those vessels, the U.S. Chiefs of Staff recommended in September that only two of the seven be employed as troop transports. These two, the former German liner *Europa* and the *Vulcania*, which originally flew the Italian flag, were used for a short time in the repatriation of American troops from Europe.

The U.S. Army also took early steps to forestall withdrawal of foreign vessels from U.S. military service immediately after the termination of hostilities, in order to avoid delay in the repatriation of American troops.[149] General Gross was desirous not only that the British and other foreign flag transports should continue in troop service but that they should remain under the control of the Combined Chiefs of Staff and available for both American and British military movements. The British Ministry of War Transport did not agree on the latter point, and a British spokesman on the Combined Military Transport Committee stated that this was a question which would have to be settled between the Prime Minister and the President.

No definitive agreement on this subject had been reached by V-E Day, but the discussion was revived soon thereafter. Early in June 1945 the U.S. Army requested the British to reconsider their reallocation of westbound troop space for that month, an allocation which greatly reduced the amount available to Americans returning from Europe and increased that assigned to Canadian personnel. This was followed by a War Office announcement that the *Queen Mary*, the *Queen Elizabeth*, and the *Aquitania* would be devoted to the transportation of U.S. troops from British ports up to the end of 1945. The United States agreed to allocate ten Victory-type and two other small troopships to the British in partial compensation.[150]

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[147] JCS Memo for Info 261, App. A, 7 Jul 44, sub: Continuance of Coordinated Contl of Merchant Shipping; Rpt of the UN Maritime Authority Plng Com, London, Sep–Oct 44, OCT HB Topic CSAB.

[148] Memo, CofT for CG ASF, 4 Sep 44, sub: Employment of Captured German Passenger Ships, ASF Hq Shipping 1944; CCS 900/3, par. 20, 24 Jul 45; CCS 679/14, 28 Sep 45.

[149] Memo, CG ASF for CofT, 18 Apr 44, ASF Hq Trans 1944; CMTC 86th Mtg, Item 1, 5 May 44; 88th Mtg, Item 2, 1 Jun 44; 89th Mtg, Item 2, 15 Jun 44; 91st Mtg, Item 3, 14 Jul 44.

[150] Ltr, CG ASF to War Office, London, 2 Jun 45, ASF Hq Trans 1945; Memo, British Army Staff Washington for C of Mvmts Div OCT (Farr) *et al.*, 25 Jun 45, and atchd War Office Directive, Jun 45, OCT HB Mvmts Div British Files. Other British troopships in British pool were allocated to transport British Empire personnel. See Trans-Atlantic Sailings and Allocations (British ships), Aug and Sep–Oct 45, OCT HB Mvmts Div British Files; CCS 679/7, 19 Jul 45.

Early in October 1945 the Prime Minister informed the President that he would be unable to justify to the British public the further use of their biggest ships for U.S. troop repatriation unless an "equivalent lift" could be provided for British use.[151] There was a difference of opinion as to what would constitute an equivalent lift, and General Gross stated that he would prefer to release the large British liners, which were available only for the North Atlantic, rather than give up the services of the number of smaller and more flexible ships which the British desired.[152] The Joint Chiefs of Staff then agreed that only one of the three British vessels (the *Queen Mary* subsequently was designated) should continue in U.S. repatriation service and that the other two should be released.[153] In December arrangements were made for further use of the westbound voyages of the *Queen Mary* until April 1946, primarily to carry British war brides of American soldiers and their children to the United States, and for the ten U.S. Victory ships to continue in British service for a like period.[154]

The extensive use which the Americans and the British made of each other's shipping necessitated hour-to-hour collaboration between the Office of the Chief of Transportation, the British Army Staff in Washington, and the representatives of the British Ministry of War Transport in New York. In order to facilitate such collaboration and the exchange of pertinent information, a British officer was assigned to OCT to serve as liaison for BAS and BMWT. Since troopships and troop movements were his principal concern, that officer occupied a desk in the Movements Division. Colonels R. Bramwell Davis, Ll. Wansbrough-Jones, W. B. N. Roderick, and G. J. G. Fisher alternately held the assignment. The arrangement worked out very satisfactorily to the Chief of Transportation. Col. Donald E. Farr, the head of his Movements Division, in a report on lessons learned from the war, contrasted the smoothness with which personnel movements were handled between the British and American offices with the less felicitous manner in which movements of the troops of other Allies were accomplished on American ships, because of the lack of a similar liaison arrangement.[155]

On the operating level, close collaboration was necessary between the U.S. Army ports of embarkation and representatives of the British Ministry of War Transport at the ports. This was especially true at New York where the head American office of BMWT was located and where the larger British troopships were loaded and discharged. Differences in methods of handling ships and troops necessitated adjustments on both sides, and the embarkation of as many as 14,000 troops within a few hours called for the closest possible co-ordination. As the war progressed and experience was gained the British-American co-operation at the water front reached a high level of smoothness and speed.

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[151] Msg, 3 Oct 45, published in JMT 72/11, 5 Oct 45, Incl B.

[152] CMTC, 94th Mtg, Item 2, 6 Oct 45.

[153] JCS 1539/1, 16 Oct 45, approved 23 Oct 45.

[154] CCS 679/18, 21 Dec 45; CCS 679/19, 15 Jan 46; Memo, CofT for OPD WDGS, 25 Jan 46, OCT HB Farr Staybacks. Later it was arranged that the *Queen Mary* should carry dependents of U.S. soldiers on one westbound voyage in May and that U.S. troopships surplus to Army needs should help with the British repatriation task. CCS 679/20, 21, 22, 23.

[155] Ltr, Wansbrough-Jones to CG ASF, 20 Jun 43, OCT HB Gross UK; Memo, C of Mvmts Div for Exec Off OCT (Finlay), par. 6, 19 Sep 45, sub: Lessons Learned, OCT HB Mvmts Div Gen.

CHAPTER VII

Operation of the Army's Large and Small Vessels

Although, as indicated in the preceding chapter, the Army operated only a small percentage of the ocean-going vessels which it utilized, the Army-operated fleet was a big and varied one in comparison with peacetime commercial fleets. On 1 August 1945 there were 186 vessels of this class (1,000 tons gross or larger) under full Army management. These vessels were manned, supplied, maintained, altered, and scheduled by the Transportation Corps. On the same date the Transportation Corps had differing degrees of operating responsibility for more than 12,000 smaller boats. It is with these two groups of vessels that this chapter is concerned primarily.

Of the 186 ocean-going vessels operated by the Transportation Corps on 1 August 1945, 40 were owned by the Army, 144 were under bareboat charter to the Army, and 2 were loaned by the War Shipping Administration.[1] Among these vessels were 51 Army transports (troopships and cargo ships), 26 hospital ships, 55 interisland vessels, 17 floating warehouses, 12 repair ships, 7 spare parts depot ships, 2 cable ships, 1 news transmission ship, and 15 training ships. Of the total, 89 were assigned to ports of embarkation in the zone of interior, 4 were undergoing conversion in the zone of interior, and 93 were assigned to oversea commands. The making of such assignments was a responsibility of the Chief of Transportation, and transfers between ports or between oversea commands required his prior approval except in emergencies. The Chief of Transportation delegated the control of assignments and reassignments to the chief of his Water Division.

In August 1942 when the Army owned or had under bareboat charter about 75 ocean-going vessels, General Gross expressed the opinion that advantages would be gained by having a larger number of vessels under Army operation.[2] The advantages which he envisioned were faster turnarounds, greater secrecy, better control of crews and greater familiarity of the crews with their vessels. He believed that the War Shipping Administration could place a greater number of ships under Army operation without prejudice to the plan of maintaining a flexible national pool of shipping under WSA control. But while the number of Army-operated ocean-going vessels increased somewhat as the war progressed, WSA met the expanding mili-

[1] AG 560 (3 Aug 45) OB-S-SPTWO-M, 13 Aug 45, sub: Monthly List of U.S. Army Transports, etc.; AR 55-515, par 4, 1 Sep 42, sub: TC Charters of Vessels; AR 55-305, 10 Oct 42, sub: TC Water Trans Gen.

[2] Memo for Gen Somervell, 25 Aug 42, sub: Action to Improve WD Water Trans, OCT HB Gross Day File.

tary need chiefly by allocating vessels to the Army on a voyage basis and operating them through its own agents. In following this practice WSA was acting in accordance with a policy laid down by the President in February 1941 and with principles discussed by Admiral Land, who was the War Shipping Administrator and the American representative on the Washington branch of the Combined Shipping Adjustment Board, and Sir Arthur Salter, the British member, soon after CSAB was established.[3]

Military, naval, and civilian personnel were used in operating the Army's ocean-going vessels. With the possible exception of a few ships assigned to oversea theaters and concerning which full information is not available, the crews on these vessels were civilians, divided into the usual deck, engine, steward's, and administrative departments, serving under a civilian master.[4] The medical staffs were military personnel provided by The Surgeon General. The armed guards (gun crews) were for the most part naval personnel. The signal sections which handled radio communications embraced military, naval, and civilian personnel. In addition, the troop transports had military complements under transport commanders to deal with passenger matters, the cargo transports had cargo security officers (later known as ship transportation officers), and the floating warehouses, spare parts depot ships, and repair ships had military personnel to perform the specialized tasks for which the ships were equipped.

Civilian Crews on Ocean-Going Vessels

During peacetime when seamen were plentiful the Army Transport Service was able to maintain a rather independent position in regard to terms of employment, but this condition changed as the United States approached a state of war. Rates of pay, also manning scales, were subject to approval by the Secretary of War.[5] During the early emergency period wage increases were recommended by The Quartermaster General as they were found necessary to enable the ATS superintendents to obtain crews for the growing transport fleet, but they lagged behind those granted by civilian operators.[6] When civilian operators began paying bonuses during the months just prior to Pearl Harbor, ATS undertook to do likewise, but because of the complicated bonus system and the many areas of Army operation there was considerable confusion, and full conformity with civilian practices was difficult.[7] Payment for overtime, a growing practice among civilian operators, could not be made on Army vessels without the approval of the Secretary of War, and there was some uncertainty as to the legal authority for such payment.

There also were differences between Army and commercial practices in regard to conditions of employment. The Army

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[3] CSAB 6th Mtg, 25 Mar 42.

[4] Functions defined in AR 55–310, 11 Nov 44 (Master); AR 55–335, 30 Sep 42 (Deck Dept); AR 55–340, 1 Sep 42 (Engine Dept); AR 55–345, 11 Nov 44 (Steward's Dept); AR 55–320, 11 Nov 44 (Trans Agent or Adm Dept).

[5] OQMG Cir 1–15, 1 Jul 37, pars. 166 and 167, as amended 23 Feb 39, sub: Regulations Governing Civilian Employees.

[6] Statement, Gen Gross to Subcom of the Com on Appropriations, HR, 79th Cong., Hearings on Military Establishment Appropriation Bill for 1946, p. 505; Conf, author with Col Alexander Corey, 26 Mar 48, sub: Crews on Army Transports, OCT HB PE Gen Transport Crews. Col Corey dealt with these matters in OQMG and later was Chief of Industrial Personnel Division, OCT.

[7] Ltr, C of Trans Br G–4 to Secy of Sailors Union of the Pacific, 27 Jan 42, OCT HB Wylie Staybacks.

ran its vessels on an open-shop basis and employed union and nonunion men without preference. It thoroughly investigated complaints and endeavored to administer crew matters with full justice to the men but refused to recognize union grievance committees as agencies for adjusting differences between masters and crews. From the union standpoint these were disadvantages. On the other hand, as civil service employees the crews on Army transports enjoyed certain advantages which were not general in the maritime industry, such as those relating to annual and sick leave, the benefits of the Civil Service Retirement Act, and the benefits of the U.S. Employees Compensation Act.[8] During the emergency period prior to Pearl Harbor, with the Army's shipping operations expanding rapidly, the seamen's unions complained frequently about the disadvantages suffered by their members on Army vessels, but they continued to give the ports of embarkation their full support in the procurement of crews.

After our entry into the war the unions increased their efforts to obtain full acceptance by the Army of the terms and conditions of employment which were in effect with civilian operators. After the establishment of the Maritime War Emergency Board in December 1941, the Army endeavored to conform to the decisions of the board regarding bonuses, war risk insurance, and compensation for loss of personal property, and although there was the customary lag in making those decisions effective, the unions had no serious cause for complaint in such matters. But the Army's position on overtime, closed shop, and the recognition of grievance committees still gave rise to union complaints, and in August 1942 a situation arose in the Gulf of Mexico which brought the matter to an open issue. The New Orleans Port of Embarkation reported that during the process of taking over the vessels *Yarmouth*, *Evangeline,* and *Florida* from private operators, the crews, which at first appeared satisfied with the terms offered by the Army, were persuaded by representatives of one of the unions to leave the ships. After about a week of effort by Army officials some of the original crew members returned to the vessels, and the remaining positions were filled with newly recruited union and nonunion seamen.[9]

Soon after this incident Mr. Edward F. McGrady, labor relations consultant to the Secretary of War, called a series of conferences which were attended by representatives of General Somervell, General Gross, and the unions. While the discussions were in progress, General Gross informed Mr. McGrady that the Transportation Corps was having no difficulty in obtaining crews for its vessels under the existing policy and urgently recommended that the War Department continue to adhere to that policy.[10] He maintained that the Army Transport Service should not change its attitude with regard to grievance committees, since it had to be free to operate its vessels "under strict military control." With regard to the unions' demands for the payment of overtime, he stated that there

[8] Memo, C of Civ Pers Br OCT for C of Water Div OCT, 26 Oct 42, OCT 231.8 Army Vessels.

[9] Summary of information by Col Franklin Kemble G–2 Hq Southern Def Comd, 10 Aug 42; Memo, C of Water Div OCT for CofT, 5 Sep 42, OCT HB PE Gen Transport Crews; Memos within Crewing Office NOPE, Hays for Higgins and Higgins for Ederer, 14 Aug 42; 1st Ind, Supt ATS NOPE for CofT, 15 Aug 42. Last two in OCT 545.02 Army Vessels.

[10] Memo, 22 Aug 42, sub: Protest of Seafarers International Union, OCT 545.02 Army Vessels.

was "pending legislation" which if enacted would enable the Army to promulgate such regulations as it might deem necessary on the subject.[11]

The result of these conferences was the issuance of a statement of War Department labor policy for vessels, which had been formulated in the Services of Supply headquarters and the Office of the Under Secretary.[12] This document, published at the end of October 1942, referred to the vital missions which Army transports performed and stated: "It is imperative, therefore, that factors of military necessity—the need for secrecy, the prevention of sabotage, the maintenance of strict discipline, the preservation of troops and cargo in the best of condition, the possibility of participation in actual combat—be accorded proper recognition in the operation of these vessels and receive precedence over all other considerations." It stated that Army Transport Service employees were free to join or refrain from joining employee organizations. It gave assurance that the crew of any vessel being taken over by the Army would be given preference in employment, but stated that in the employment of additional crewmen "the sources of labor supply normally utilized by the War Department" would be drawn upon. Suspension on suspicion of subversive or other inimical activities would be executed summarily under procedures established by the Secretary of War, but the employees involved would be accorded opportunity for review of their cases. Discharges for other forms of misconduct would be reviewed upon request to the responsible Army official within a reasonable period. Grievances would be adjusted and disputes settled upon the termination of voyages in continental ports of the United States, and mass meetings and the formation of committees on board were prohibited. Noncompliance with orders of the ship's master, or infraction of laws relating to conduct aboard, would be considered grounds for discharge or other appropriate disciplinary action as provided for by statute or regulation. The prevailing basis of compensation in the industry would be observed on all vessels operated by the War Department, including emergency and overtime wages, war bonuses, and repatriation and allotment conditions, effective 1 November 1942.

This statement of policy met the more critical points of the unions' complaints. However, early in January 1943 a statement was filed by the National Maritime Union with the Under Secretary alleging that, with the exception of review of discharge cases, the provisions of the policy had not gone into effect.[13] After investigation, the Water Division reported that, contrary to the allegation, the policy had been in full force and effect, except in regard to overtime wages. The report stated that the preparation of regulations governing the payment of overtime on Army vessels operating in all parts of the world had required extensive study, but that records had

[11] Bill to authorize payment of overtime had been drafted in OCT in June 1942, but Gross had decided not to press it then. Memo, Pers Div OCT for Water Div OCT, 13 Jun 42, OCT 231.8 Army Vessels; Memo, Pers Div OCT of OSW, 27 Jun 42, sub: Draft of Proposed Overtime Legislation, OCT 231.8 Army Vessels; Conf with Corey cited n. 6.

[12] Memo, CofS SOS for TAG, 29 Oct 42, AG 570.1 (10–29–42); WD Memo W620-4-42, 31 Oct 42, sub: WD Labor Policy Governing Vessels Operated by WD, in AG 570.1 (10–29–42); Conf with Corey cited n. 6.

[13] Ltr, Vice Pres NMU to USW, 7 Jan 43; Memos, DC of Water Div OCT for ACofT for Opns (Wylie), 14 and 18 Jan 43. All in OCT 231.8 Army Vessels (10–31–42).

been kept since 1 November 1942 and any regulations issued subsequently would be made retroactive to that date. A ruling of the Comptroller General was considered necessary before overtime could be paid legally, but Maj. Gen. Wilhelm D. Styer, Acting Commanding General, Services of Supply, gave oral direction that overtime payments be started without waiting for such a ruling. The pertinent regulations were issued immediately by the Chief of Transportation.[14] The payment of overtime on Army transports was legalized a few months later by the War Overtime Pay Act of 1943.[15]

During the remainder of the war the relations of the Transportation Corps and the seamen's unions were on a mutually cooperative basis. There were problems of a local nature, but no serious threats of strikes or other crises. When the rapid increase in the merchant fleet, the competition of less hazardous jobs ashore, and the operation of the Selective Service Act made the task of obtaining full crews increasingly difficult, the unions, when called upon, provided men to the extent of their ability.[16] The relations between the Transportation Corps and the organizations of licensed marine officers also were orderly throughout the war, and there were no serious disputes or strikes.

In July 1944 a further statement of labor policy governing vessels operated by the War Department was issued to supplement and amplify the statement of October 1942.[17] It then was announced that marine personnel regulations to implement the approved policies would be issued by the Chief of Transportation and that thereafter the regular civilian personnel regulations would not apply to seamen unless they specifically so provided. A volume of Marine Personnel Regulations, in which was assembled all rules relating to the subject, was published concurrently "for the information and guidance of all War Department installations charged with responsibility for civilian marine personnel engaged on vessels operated by and under the jurisdiction of the Chief of Transportation." [18] The policies and procedures were "indorsed to commanding officers outside the continental limits of the United States for adoption." It is not possible to review the many provisions of these voluminous regulations. Certain sections will be referred to, however, in the following discussion of a number of matters which were basic to the Army's plan of operating vessels.

Although the officers and crews of Army vessels were civil service employees, practical considerations, particularly during wartime, dictated that certain of the civil service requirements be relaxed. Such positions were not subject to the Classification Act of 1923, but were ungraded, so that the Chief of Transportation was free to adjust wages and overtime payments to the levels prevailing in the industry. The Civil Service Commission, at first informally and then formally, agreed to exempt this personnel

[14] Conf with Corey cited n. 6; CPRTC 20–80, 23 Jan 43, sub: Overtime Compensation for Crew Members of Transport Class Boats. Overtime regulations for crew members of harbor and interisland boats were issued separately on the same date.

[15] PL 49, 78th Cong., Sec. 13, 7 May 43.

[16] Memo, C of Water Div OCT for DCofT (Franklin for Dillon) 25 Apr 42; Conf with Corey cited n. 6. Both in OCT HB PE Gen Transport Crews.

[17] WD Civ Pers Cir 80, 17 Jul 44, sub: Policy Governing Marine Pers Adm.

[18] TC Pamphlet 4, 1 Jul 44, sub: Marine Pers Reg, OCT HB Ind Pers Div Civ Marine Pers. The regulations covered both transports and small boats; they were subject to frequent revision as conditions changed.

from the requirements of competitive examination and approval by the commission prior to appointment.[19]

In accordance with maritime practice, the Marine Personnel Regulations provided that crew members sign the ship's articles at the beginning of each voyage, thus placing themselves under contract for the round voyage.[20] But provision was made also for individual contracts with masters, officers, and men of unlicensed ratings who were engaged for longer periods of duty, as was necessary in the case of vessels permanently assigned for service within the oversea commands. Individual contracts were used more extensively in engaging crews for harbor boats and interisland vessels than for transports, and therefore they will be discussed in a later section of this chapter.

Authorized crew strengths, or manning scales, were established by authority of the Chief of Transportation.[21] They were based on requests made by the ports of embarkation or the oversea commands to which the vessels were assigned, on study and recommendation by the Water Division, and on final approval by the Industrial Personnel Division.[22] Manning scales could not be changed without the approval of the Chief of Transportation except in an emergency, in which case the ports and the oversea commands were authorized to take such immediate action as might be necessary and afterwards obtain review and confirmation of their action.[23] The practice was to allow the ports of embarkation considerable latitude in the exercise of this emergency power, so that they would not be handicapped in meeting unforeseen requirements or be delayed in putting transports to sea. The oversea commands required even greater freedom in manning the vessels permanently assigned to them, since operating conditions in the theaters were less stable, but in general they conformed to the practices prescribed in Washington.

Transport personnel was recruited by the civilian personnel officers of the ports of embarkation, to meet the requirements of the vessels for which the ports were responsible or to fill requisitions submitted by the oversea commands and approved by the Chief of Transportation. The Transportation Corps endeavored to be self-sufficient in this respect. Recruitments were made in the open market, and only when this method fell short of the desired results was assistance requested from the Recruitment and Manning Organization of the War Shipping Administration or the union hiring halls. Appointments were made by the port civilian personnel officers, after approval of the appointees by the port water divisions which were responsible for the operation of the vessels. The employment of aliens was permissible if they met the technical and security requirements. The policy was to appoint aliens only when citizen

[19] Marine Pers Reg, pars. 11.1, 31.2; Hist rpt, Ind Pers Div OCT FY 1945, p. 2, OCT HB Ind Pers Div Gen.

[20] Marine Pers Reg, pars. 32.2, 32.3.

[21] Marine Pers Reg, par. 11.2; see TC Cir 80–4, 1 Jan 44, sub: Standard Crew Strength for C–2 and C–3 Type Freight Vessels. Numbers of authorized jobs on transports and hospital ships are given in lists attached to Memo, Ind Pers Div for Hist Unit OCT, 16 Sep 44, OCT HB Ind Pers Div Gen.

[22] Memo, Civ Pers Br Pers Div OCT for OCT Historian, 27 Jan 47, OCT HB PE Gen Transport Crews; Memo, Water Div OCT for Civ Pers Br Pers Div OCT, 27 Jul 43, sub: Manning Scale USAT *Lakehurst*, OCT 000.900 *Lakehurst* Misc; Memo, NYPE for CofT, 30 Oct 43, OCT 231.8 Army Vessels 1943.

[23] Marine Pers Reg, par. 11.3; Ltr, C of Water Div OCT for CG SPE, 3 Nov 42; Memo, C of Water Div OCT for C of Contl Div OCT, 20 Jul 43, sub: Work Simplification. Both in OCT HB PE Gen Transport Crews.

INSTRUCTION IN NAVIGATION AND MARINE ENGINES *given at the Marine Officer Cadet School, St. Petersburg, Fla., to prospective civilian officers in training for service on Army transports and small boats.*

applicants were not available, and in the manning of Army transports at American ports it was necessary to employ only a limited number of noncitizens.[24]

In his endeavor to meet manning requirements through the efforts of his own organization, the Chief of Transportation directed all ports of embarkation to maintain manning cadres, or stand-by pools of seamen of various types. The size of each cadre was subject to approval by the Industrial Personnel Division at headquarters.[25] The men were used to fill vacancies in order that sailings from U.S. ports might not be delayed, and also to meet urgent requests from the theaters for marine personnel. During the latter part of the war many vacancies on the transports were filled with officers graduated from the Marine Officer Cadet School at St. Petersburg, Fla., and with licensed and unlicensed personnel which had completed courses at the Civilian Marine School at New Orleans. These schools were established by the Chief of Transportation during the summer of 1943 primarily to provide personnel for small boats operated in the theaters, but, after the peak of that demand had passed, qualified trainees were placed on ocean-going vessels as required.

Active ocean-going seamen were eligible for deferment under the Selective Service Act, and this provision applied to seamen on Army vessels whether they were engaged in transoceanic or coastwise service.[26] Requests for deferment and notices of termination of employment were filed with the Recruitment and Manning Organization of the War Shipping Administration, which kept an over-all record of seamen and processed such matters with the local selective service boards. Civilian personnel officers at the home ports initiated requests for the deferment of seamen and certified as to their regular employment. Masters and transportation agents on the vessels were responsible for notifying home ports when deferred seamen deserted, failed to join the ship, or otherwise were separated from the service. Draft deferment and the threat of its cancellation were effective aids in recruiting and holding personnel for the transports, and the reduction in the upper age limit for men subject to the draft had an appreciable though not serious effect on the manning problem.

By maintaining stand-by pools and tapping all available sources of marine manpower, the Transportation Corps was able to avoid the necessity of delaying the sailing of any Army-operated transport from a U.S. port because of inadequate crew. In this the Army was aided by a relaxation of the enforcement of the inspection regulations in favor of vessels carrying troops and military cargoes, authorized by the Secretary of Commerce in December 1941. Promotions from the lower grades to meet requirements in the higher grades frequently were necessary in order to sail ships as scheduled, and some vessels were permitted to sail with less than the prescribed crew complements, but in making such departures from the usual practices care was taken not to jeopardize the safety of the ships.[27]

[24] Conf with Corey cited n. 6. Crews provided for transports and small boats operating within the oversea theaters included a larger percentage of aliens.

[25] Size of cadres for transports authorized as of 1 Sep 44 ranged from 25 at Prince Rupert to 257 at San Francisco. Memo, Ind Pers Div for Hist Unit OCT, 16 Sep 44, OCT HB Ind Pers Div Gen.

[26] Marine Pers Reg, par. 81.1–3; Conf with Corey cited n. 6.

[27] Gross final rpt, p. 68; Conf with Corey, cited n. 6; Ltr, Secy Commerce to SW, 31 Dec 41, with atchd instructions to collectors of customs, 30 Dec 41. Last two in OCT HB PE Gen Transport Crews.

Though some vessels operated by agents of the War Shipping Administration were delayed because of insufficient crews, they were remarkably few considering the rapid growth of the fleet and the over-all manpower shortage and they decreased as the WSA recruiting and training organization expanded.[28] The accomplishments of that organization naturally eased the Army's recruiting problem.

While no attempt was made to determine the rate of personnel turnover for the entire Army transport fleet, samplings were made at different times. In January 1943, for example, the turnover was found to be 32 percent per voyage for the vessels considered.[29] In September 1944 the available data indicated an average turnover of about 34 percent.[30] These percentage figures represent replacements for particular ships and voyages and do not take into account the fact that many seamen returned to the same or another Army vessel after a period ashore. The rate of turnover was not considered excessive, in view of the hazards involved and the long trips made by many of the ships.

The War Department adopted certain arrangements for the promotion of the welfare and the morale of seamen and their families. The provisions of Public Law 490, 77th Congress, relating to continuation of pay and dependency allotments for missing or captured personnel were made applicable to seamen on Army vessels.[31] In accordance with the provisions of Public Law 523, 77th Congress, the War Department requested the War Shipping Administration to provide insurance under an open policy to cover the death or injury of seamen and the loss or damage of seamen's personal effects.[32] A clause was inserted in the shipping articles for Army vessels, under which the seaman or his beneficiary could choose between the benefits accruing under the Employees Compensation Act of 1916 and those accruing under the new act.[33] The Army assumed the expense of "maintenance and cure" during sickness or injury incurred while in the service of its vessels, in accordance with a long-standing practice of the industry.[34] The Army supported a Maritime Commission proposal which resulted in the passage of Public Law 524, 77th Congress, and in accordance with that law it recommended from time to time to the Merchant Marine Medal Awards Com-

[28] Rpt of WSA to the President, *The United States Merchant Marine at War*, January 15, 1946, p. 55; "West Coast Ships Lack Men to Sail," *The New York Times*, June 25, 1944; "Thin Crews Delay Convoy Departures," *The Washington Post*, August 5, 1944.

[29] Memo, C of Water Div OCT for Dir of Opns OCT, 18 Jan 43, OCT 231.8 Army Vessels (10–31–42). Statement was made in response to union charge that Army crew replacements had reached a new high of 70 percent.

[30] Memo, Ind Pers Div OCT for Hist Unit OCT, 16 Sep 44, OCT HB Ind Pers Div Gen.

[31] WD Cir 97, 3 Apr 42; Memo, TAG for CG SOS, 13 May 42, sub: Adm of PL 490, AG 240 (1–3–42) Sec I, PL 490; 1st Ind, CofT for TAG, 18 May 42, AG 240 (1–3–42) Sec I, PL 490; Marine Pers Reg, pars. 141.1–4.

[32] Ltr, SW for WSA, 18 Jul 42, OCT 019.3 PL 523; Memo, CofT for CG SOS, 11 Aug 42, sub: Authority to Declare Risks; Memo, CG SOS for CofT, 12 Aug 42. Last two in OCT 019 Army Vessels.

[33] Memo, C of Water Div OCT for C of Contl Div, OCT, sub: Payment of $5,000 Under Shipping Articles; Memo, DC of Water Div OCT for CG BPE, 14 Jun 43, sub: War Risk Benefits; Memo, C of Water Div OCT for CG BPE, 9 Oct 43, sub: Payment of Claims. All in OCT 019 Army Vessels.

[34] Memo, Legal Div OCT for Civ Pers Div OCT, 6 Apr 43, sub: Payment of Charges for Hospitalization of Seamen, OCT 019 Army Vessels; Memo, CofT for CG ASF, 19 Oct 43, OCT 231.8 Army Vessels; TC Cir 80–11, par. 1–4, 11 Jan 44, sub: Approved Rider for Shipping Articles; Marine Pers Reg, par. 131.4.

mittee that the Merchant Marine Distinguished Service Medal be presented to deserving seamen.[35]

When the War Department labor policy which was announced 31 October 1942 was being formulated, the maritime unions placed great stress on the establishment of grievance procedures similar to those existing in industry, and the idea had support in the Civilian Personnel Division of Services of Supply headquarters.[36] The Water Division and Civilian Personnel Branch in the Office of the Chief of Transportation opposed the introduction of such elaborate procedures on the ground that they would involve delay in dealing with matters of crew discipline and possibly in making vessels ready for sailing. Their opposition was successful and a less cumbersome procedure was set up. Any employee or group of employees who believed they had a grievance, upon termination of the voyage in the United States could present the complaint to the commander of the vessel's home port, directly or through representatives. If the port commander's settlement was not satisfactory, the complainant could take the matter up with the Secretary of War through the Chief of Transportation.[37]

Although the necessity of sailing ships without delay resulted in many seamen being signed on who otherwise would not have been employed, a strong policy against the employment of men suspected of subversive activity was enforced. Under the Act to Expedite the Strengthening of the National Defense, 2 July 1940, the Secretary of War was authorized to remove "forthwith" from the classified civil service of the United States any employee in the military establishment who after thorough investigation had been found guilty of conduct inimical to the public interest and the defense program. The commanding officer of the station by which a suspected individual was employed was authorized to suspend him during the investigation if his presence was believed to jeopardize the security of the station.[38] The statement of War Department labor policy governing vessels affirmed the applicability of these provisions to seamen. Under direction of the Chief of Transportation the commanders of ports of embarkation not only were required to refuse to employ persons suspected of subversive activities and to suspend those already employed on Army-operated vessels, but also to cause such persons to be removed from War Shipping Administration vessels which were allocated to the Army and berthed at Army piers. In order that prompt and fair review of suspensions might be afforded at the ports, the port commanders were directed to designate reviewing officers entirely independent of the officers whose duty it was to initiate suspension actions.[39] Ac-

[35] Memo, SW for Bureau of Budget, 23 Feb 42, AG 334.8 U.S. Mar Com (2–9–42); Memo, Adm Div OCT for Chm of MMMAC, 23 Apr 43, OCT 230.72 Merchant Marine DSM; Memo, DC of Water Div OCT for Exec Secy MMMAC, 19 Jun 43, OCT HB PE Gen Transport Crews.

[36] Conf with Corey, cited n. 6.

[37] WD Memo W620–4–42, par. 3f2, 31 Oct 42.

[38] PL 703, 76th Cong.; Memo, TAG for CG's AAF, AGF, SOS, etc., 31 May 42, AG 230 (5–28–42).

[39] Memo, CofT for port comdrs, 6 Nov 42, sub: Removal of Suspected Subversives, OCT 231.8 Gen. WSA vessels were included in this directive despite contention of Navy that authority to remove subversives from such vessels belonged exclusively to Coast Guard Captain of the Port, and in June 1943 agreement between CofT and Commandant of USCG recognized authority of TC over WSA vessels. Memo, CofT for Port Int Off NYPE, 21 Aug 42; 1st Ind, ACofS G–2 NYPE to C of Int Div OCT, 24 Aug 42; 3d Ind, ACofS G–2 WD to CofT, 30 Sep 42. All in OCT 230.8 Gen. See also Memo, C of Legal Div OCT for Int and Security Div OCT, par. 7, 23 Aug 43, OCT 231.8 Gen.

tions against suspected subversives were based chiefly on reports of the Military Intelligence Service of the Army but also on information obtained from the U.S. Coast Guard and the British Security Coordination under exchange arrangements.[40]

Crew discipline was a matter of constant concern to the Army, because of the casual types of seamen which had to be employed, the relative inexperience of many masters and mates, and the unusual conditions encountered in wartime. The problem was particularly acute at those oversea ports where seamen were required to assist in loading and unloading cargo or to perform other unusual tasks because of the lack of local longshoremen or equipment.[41] At many such ports civil courts were nonexistent or ineffective. Accordingly in October 1942 the commanders of theaters of operations, defense commands, service commands, and ports of embarkation were informed that the military tribunals of the United States had jurisdiction over the crews of merchant vessels—not only Army transports but other American and foreign vessels—operating within a base or military area or carrying matériel or personnel in connection with U.S. military operations. These commanders were instructed to exercise necessary authority whenever military considerations required.[42] Clarification of the extent to which this authority should be exercised was necessary as the result of inquiries from the War Shipping Administration and the British Government. The War Department's position was that while military commanders had court-martial jurisdiction over merchant seamen, such jurisdiction should not be invoked when civil tribunals were available in which the military commanders had confidence, and which had the authority and the disposition to punish offenders promptly and adequately.[43]

A word is necessary regarding the ship transportation agent, who was in charge of the administrative department on Army transports, since his functions varied somewhat from those of the purser on commercial vessels. The prewar regulation provided that home port commanders should assign to each vessel a transport quartermaster (commissioned officer), or a quartermaster agent (civilian). Under the Transportation Corps the designations were changed to transportation officer and transportation agent, and since as the war progressed it became increasingly difficult to assign officers, the regulation eventually was revised to provide only for transportation agents.[44] The ship transportation agent was charged with the care and issue of supplies, the care and disbursement of funds, the performance

[40] Misc Ltr 34, CofT for CO's of PE's, 27 Jan 45, OCT 231.8 Gen; Memo, MID WD, 21 Jul 42, MID 231.82; British List of Suspected Seamen, April 1942. Last two in OCT 231.8 Jan 42–Jun 43.

[41] Memo, CofT for CofS ASF, 26 Jun 43, OCT 250.401 Crews; Memo, C of Int Div OCT for Legal Div OCT, 17 Oct 42, OCT 560.1 Army Vessels.

[42] Memo, by order of SW, 9 Oct 42, WD 250.01 (10–8–42), sub: Authority of Commanders and Jurisdiction of Military Tribunals with respect to Crews of Merchant Vessels, OCT 250.401 Crews; WD Cir 164, Sec. I, 19 Jul 43; WD Cir 175, Sec. IV, 30 Jul 43.

[43] Ltr, WSA to ASW, 9 Oct 42; Summary by CofT, 19 May 44; Ltr, USW to WSA, 22 May 44. All in OCT 250.401 Crews. Extensive correspondence with British is in file OPD 250.4 Great Britain and AG 250.4 (6 Oct 42). For American seamen's attitude see Memo, Col E. S. Greenbaum for USW, 27 Oct 42, in OCT HB Gross Crews; Ltr, Chm Natl Maritime Union's Ships Com to JAG, 12 Apr 44, OCT 250.401 Crews; Memo, JAG for CofT, 19 May 44, OCT 250.401 Crews; WD Pamphlet 27–5, Feb 45, sub: Mil Jurisdiction over Merchant Seamen.

[44] AR 30–1120, 23 Jul 32; AR 55–320, 11 Nov 44, sub: Ship Trans Agent.

of the duties of baggage-master and civilian personnel officer for the ship, and the preparation of papers and reports required by law or by Transportation Corps regulations.[45] He was responsible to the master and the home port commander in all matters except funds, for which he accounted directly to the Fiscal Director of the Army Service Forces. On cargo vessels the transportation agent himself usually handled all the work of the administrative department, but on troop transports he had as many as six assistants.[46]

Maintenance and Voyage Repairs

Army-owned vessels, being public vessels used for a public purpose, were not subject to the navigation and inspection laws, and during peacetime they were permitted to fall below the standards of maintenance necessary to obtain certificates of inspection.[47] Funds were obtained late in 1940 to recondition the transports then in service, and thereafter in the interest of efficiency and safety it was the policy of The Quartermaster General, and later of the Chief of Transportation, to comply with the vessel inspection laws and regulations to the extent that military considerations would permit.[48] As regards vessels serving the Army but not exempt from the navigation and inspection laws, arrangements for the issuance of waivers were made, pursuant to Section 501 of the Second War Powers Act, 1942, which in effect left to the Army the final decision as to when such waivers should be issued.[49] In accordance with these arrangements, the Army port commanders were authorized to file requests for waivers with the U.S. Coast Guard, and, in case the initial request should be denied, to file a statement that the military urgency outweighed the marine hazard involved, which was tantamount to a directive that the waiver be issued.[50] The Army agreed not to override Coast Guard denial of waiver until a conscientious effort to reach agreement had been made by officers of the two agencies.[51]

During the war standards for the maintenance of ocean-going vessels to prevent excessive deterioration, promote economical operation, and observe safety requirements were defined in considerable detail in Army and Transportation Corps regulations.[52] Primary responsibility for the enforcement of maintenance standards on vessels assigned to ports of embarkation in the zone of interior rested with the superintendents

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[45] FM 55-105, par. 47, 25 Sep 44, sub: Water Trans: Ocean-Going Vessels.

[46] Conf, author with John J. Bratton, 4 Mar 47, OCT HB PE Gen Transport Crews. During the war Bratton was a ship transportation agent and later an employee of Water Division, OCT. Memo, Civ Pers Div OCT for Water Div OCT, 24 Oct 42, OCT 231.8 Army Vessels 1942, gives crew strength in all departments.

[47] Memo, Cordiner for Dillon, 12 May 41, OCT HB OQMG Water Trans Br. For definition of public vessel see USCG Navigation and Vessel Insp Cir 41, 21 Sep 43, OCT HB PE Gen Transport Insp.

[48] TC Cir 80-1, par. 1, 1 Jan 44.

[49] Regarding application of navigation and inspection laws to such vessels, see Memo, JAG for CofT, 4 Aug 43, sub: Application of Insp Laws to Privately Owned Vessels Employed by WD, OCT 333.7 Prevoyage Insp of Vessels.

[50] OCT Cir 114, 14 Sep 43, sub: Waiver of Nav and Vessel Insp Laws; OCT Cir 174, 22 Dec 43.

[51] TC Cir 80-20, 29 Mar 45, sub: Army Vessel Insp. Question of seaworthiness involved in waiver arrangements included adequacy of crews as well as physical condition and equipment of vessels. See Memo, Comdt USCG for district Coast Guard officers, 14 Dec 42, sub: Presailing Insp, OCT 333.7 Prevoyage Insp of Vessels.

[52] AR 55-505, 1 Sep 42; TC Cir 80-2, 1 Jan 44; Supp. 1, 3 Apr 44; Supp. 2, 14 Apr 44; Supp. 3, 9 Jun 44.

of the Water Divisions at the ports. Shortages of labor and material, and the necessity of dispatching vessels on designated convoy sailing dates, often prevented full compliance with the regulations. Important departures from the maintenance routine, such as delay in dry-docking a vessel beyond the permissible period, required the approval of the Chief of Transportation. The superintendents were required to establish boards of competent technical inspectors to make complete and thorough inspections of all compartments, machinery, equipment, and underwater parts at least once a year, independent of any inspections conducted by the Coast Guard. The port commanders were required to have an adequate, though naturally less thorough, inspection made prior to the sailing of each Army-operated transport and of other troop-carrying ships serving the Army, and to submit a copy of the inspection report to the Chief of Transportation.[53]

General Gross, while anxious to avoid delayed sailings, was insistent on the observance of all safety measures. He placed special emphasis on thorough prevoyage inspection of troop-carrying vessels and prompt action to correct any deficiencies, and he impressed on the port commanders that responsibility for the safe carriage of troops was primarily theirs.[54]

The performance of maintenance and repair work was carefully controlled. The master, chief engineer, and chief steward of each vessel were required to prepare requisitions for their respective departments, which they submitted to the superintendent of the Water Division upon arrival at the home port. The superintendent or his representative inspected the proposed work and decided which jobs should be done during the current stay in port, and whether they should be done by the crew, the dock force, or at a contractor's plant.[55] Each port of embarkation had a marine repair shop which functioned under the superintendent of the Water Division and performed ship repairs to the extent of its capacity. Because of the backlog of work at contractors' yards, the Army shops were called on for a wide variety of work and their facilities and equipment were expanded greatly during the war.[56] At the same time an effort was made to restrict the work of the Army shops as much as possible to normal voyage repairs and not to undertake larger jobs when commercial yards could perform them. An explicit rule was given for differentiating between "normal or voyage repairs" and "alterations and major repairs." [57] Ports of embarkation were authorized to accomplish the former at their own discretion but were not permitted to undertake the latter type of work without approval of the Office of the Chief of Transportation. Alterations and major repairs to Army and War Shipping Administration vessels to make them more suitable for military service constituted a very important phase of Transportation Corps' wartime activity and will be discussed more fully in a subsequent chapter.

[53] TC Cir 50–20, rev., 15 Jun 44, sub: Prevoyage Vessel Insp Rpt.

[54] Memos for port comdrs, 23 Sep 42, and 17 Nov 42; Memo, CofT for CG SOS, 11 Nov 42, sub: Ports of Emb. All in OCT 333.7 Prevoyage Insp of Vessels.

[55] AR 55–505, par. 4, 1 Sep 42.

[56] Remarks, Brig Gen Robt H. Wylie at Port and Zone Comdrs Conf, Omaha, Sep 1945, p. 49, OCT HB PE Gen Port Comdrs Conf.

[57] TC Pamphlet 34, Sec. I, 1 Apr 45, sub: Repairs and Alterations to Vessels, OCT HB Water Div Ship Repair and Conv.

Supplies for Vessels

The method of handling supplies on Army transports was found to be loose and inefficient by the chief of The Quartermaster General's Transportation Division, who investigated the matter during the summer of 1940.[58] That official took steps to correct the situation, but ten months later he was able to report only limited progress. The reason given for the delay was that the Army Transport Service superintendents, whom he had charged with finding ways and means of effecting improvement, were hampered by "the press of other business." A likely further reason may be found in the fact that although the regulations stated that the transport quartermasters, who at that time had charge of supply matters on the vessels, were representatives of the ATS superintendents, the inspection of the transport quartermasters' property and financial accounts at the end of each voyage was a responsibility of the finance officers of the corps areas. This inspection responsibility was transferred to the port commanders in March 1942.[59] The Water Division in the Office of the Chief of Transportation gave the subject continuous attention, and other improvements in the system were effected gradually.

During the war the handling of supplies on an Army vessel, except medical and sales commissary supplies, was a function of the ship transportation agent, who was assigned by and was responsible to the commander of the vessel's home port.[60] He prepared requisitions based on requests made by the chiefs of the several ship departments, submitted them for the approval of the master in the case of supplies required for the operation of the vessel and for the approval of the transport commander in the case of supplies required for the permanent military staff of the vessel, and finally submitted the approved requisitions to the port commander on arrival. He arranged for all supplies to be checked on and off the vessel and investigated shortages. He kept simple stock record cards, on a prescribed War Department form, for each item of supply for which he was responsible, except subsistence supplies for which more detailed accounting was required.[61] The commander of the vessel's home port was required to have frequent inspections made to establish that the transportation agent's records reflected the true status of the stock and that there had been no waste or misuse of government property. The Chief of Transportation was required to issue "standard tables of allowances" to govern the storing of vessels.

In the enforcement of economy in the supply of Army transports, emphasis was placed on the use of standard stocks and the restriction of local purchases to the practical minimum. Standard stocks were defined as those listed in the stock catalogs of the several technical services. "Special and fancy equipment and supplies" were not to be used, and when standard stocks were not available the nearest practical substitutes were to be found. Since subsistence stores offered an exceptionally wide range of choice, purchases were limited to items and qualities listed by the Chief of Transportation. The list stated that expensive cuts of

[58] Memo, Cordiner for Dillon, 12 May 41, par. 3e, OCT HB OQMG Water Trans Br.

[59] AR 30–1250, 22 May 31, sub: Supplies for Transports; Memo, TAG for CG's of Corps Areas and PE's, 5 Mar 42, AG 333.7 (2–20–42) Insp of Vessels.

[60] AR 55–320, 11 Nov 44, sub: Ship Trans Agent.

[61] AR 35–6580, 6 Jun 42, sub: Accounting for Subsistence; AR 55–450, 11 Nov 44, pars. 3, 4, 7, 9, 10, sub: Supplies on Transports.

meats were to be omitted; good but not de luxe qualities of canned goods were to be used; smaller quantities than those specified for the several items were to be purchased only when unavoidable. Local purchases of standard or nonstandard items by ship transportation agents or by ports of embarkation were restricted to cases of emergency.[62]

Each technical service was responsible for the procurement, storage, and issue of standard items peculiar to it for use on Army transports, and the Chief of Transportation was directed not to procure, store, or issue the standard items of other technical services.[63] Requirements of nonstandard items were determined by the Transportation Corps, which was responsible also for their storage and issue, but such items were procured by the technical services responsible for the purchase of similar standard items. As regards items procured by the Transportation Corps, the Water Division furnished the Director of Supply with the information necessary to enable him to stockpile what would be needed for the supply, maintenance, repair, and conversion of vessels.

Up to April 1945 the Water Division, which was charged with preparing standard tables of allowances, had not succeeded in doing so because of the many types of vessels involved and the many different missions which they performed.[64] Its representative, who completed an investigation at the New York Port of Embarkation in April, reported that although the stock records on the vessels were found in good order so far as the receipt and disbursement of supplies were concerned and the ports had endeavored to edit requisitions from the ships in order to control the types and quantities of supplies furnished, no satisfactory control was possible without tables of allowances from which to work. The Chief of Transportation then issued detailed instructions for the establishment of such tables.[65] They were to be based on lists prepared initially by the heads of the several ship departments and reviewed successively by the ship transportation agents, the ports of embarkation, and the Office of the Chief of Transportation. After tables of allowances had been established, the port commanders were to be responsible for keeping them current.

In a further effort to improve the procedures and rules, the Chief of Transportation established a Committee on Standardization for Army Vessels, consisting of representatives of the Director of Supply, the Water Division, and the Port and Field Agencies Division.[66] At its first meeting the committee decided that in addition to tables of allowances for individual transports and hospital ships, a port supply catalog, including all items contained in the tables of allowances, was desirable. Meetings were held with the supply and technical service representatives of the ports of embarkation to obtain information and make plans for the furtherance of this work.[67] Tables of

[62] OCT Cir 133, 19 Oct 43, sub: Supplies for Army Transports; OCT Cir 80–16, 4 Apr 44, sub: Vessels—Supplies; WD Cir 310, Sec. VII, 20 Jul 44; AR 55–450, par. 2, 11 Nov 44.

[63] ASF Cir 387, Sec. VI, 25 Nov 44; TC Cir 5–21, 6 Dec 44, sub: Supply Responsibility; TC Cir 150–29, 6 Jan 45, sub: Supplies for Army Vessels.

[64] Rpt, Maj K. N. Sachs to Acting Dir of Opns OCT, 2 Apr 45, extracts in OCT HB PE Gen Transport Equip and Supplies.

[65] OCT Misc Ltr 174, 24 May 45, sub: T/A Army Transports.

[66] OCT Office Order 5–39, 2 Jun 45.

[67] Com Mtg, 19 Jun 45; Mtgs, 26–27 Jun 45, at NYPE, and 13–14 Jul 45, at SFPE. All in OCT HB PE Gen Transport Equip and Supplies.

allowances for individual vessels were approved as rapidly as recommendations from the vessels could be obtained and the prescribed checking completed. The approved lists of allowances, as they eventually were designated, were in two parts, one part covering items common to all vessels and the other covering items peculiar to a specific vessel or type of vessel. Though very few lists were approved prior to V-J Day and such lists were considered only tentative, the committee continued its work and eventually approved lists of allowances for all vessels under Army operation. Port supply catalogs were not prepared, since it was found that the approved lists of allowances, giving the correct descriptions of items, the stock numbers, and the issuing agencies, in addition to the quantities to be stored by the respective vessels, obviated the need for such catalogs.[68]

Although considerable progress was made, a complete system for controlling the storing of transports was not achieved during the war. A number of reasons may be cited. That task naturally was given a lower priority than others which had direct bearing on the prompt and safe movement of troops and supplies. There was a scarcity of men with sufficient technical knowledge to formulate a practical system, and their services were in great demand in other branches of marine activity. The shortages which existed in many branches of Army supply frequently placed port and transport officers on their own resources to complete the storing of vessels before sailing time and limited the effectiveness of the effort to enforce standardization. In June 1945 the technical services at the New York Port of Embarkation estimated that 8,050 different nonstandard items were being furnished Army vessels, compared with 4,500 standard items. Estimates prepared a few weeks later indicated that 6,200 nonstandard and 15,238 standard items were being supplied at San Francisco, and that 10,300 nonstandard and 8,268 standard items were being furnished at Seattle.[69] These figures represent only rough computations, as the wide variations between the ports indicate, but they show nevertheless that the ports had to supply a very large number of nonstandard items right up to the end of the war.

Food Service on Transports and Hospital Ships

The messes on Army troopships were the subject of careful study, along with the messes at port staging areas. The problem of maintaining proper standards on the ships was accentuated by the abnormal number of passengers carried and the limitation on the expansion of galleys and mess quarters. Under Army regulations, the ship's chief steward was charged with supervising the preparation and serving of meals and with assuring that the stores used were good in quality and adequate in quantity. The superintendent of the Army Transport Service (later called Water Division) at the ship's home port was directed to "in general terms prescribe the bills of fare" on transports; the commanding officer of troops (later called transport commander) was directed to see that suitable and proper meals were provided for the various passenger messes; the transport surgeon was

[68] Conf, author with Philip E. King, Water Div OCT, 30 Jan 48, OCT HB PE Gen Transport Equip and Supplies. King worked in close collaboration with the committee from its inception.

[69] Mtgs at NYPE and SFPE cited n. 67.

responsible for hospital messes on transports and hospital ships.[70]

In July 1943 Army Service Forces headquarters launched a program for the improvement of the food service at Class I and IV installations, made the commanding generals of the service commands responsible for the execution of the program, and designated The Quartermaster General to give the activity staff supervision.[71] The plan called for the appointment of a director of food service in each service command and a food service supervisor at each installation, including the ports of embarkation. The supervisory functions which the Army Transport Service superintendents long had exercised over transport messes overlapped the functions committed to the new food service supervisors assigned to the ports, a fact which led to some confusion. Late in August 1945, in order to clarify the situation, the Chief of Transportation defined in detail the duties assigned to the food service supervisors, the port stewards, the transport commanders, and the ships' chief stewards.[72] His directive stated that the port steward would conduct a food service and supervise all phases of feeding on the vessels on behalf of the superintendent of the Water Division, but it also placed the port stewards under the staff supervision of the food service supervisor. The source of the difficulty was not thus removed, and while at most ports the officers involved worked harmoniously toward a common goal, at one important port the dual responsibility of the superintendent of Water Division and the food service supervisor led to considerable friction.[73]

During the greater part of the war there was a lack of clarity in the regulations regarding the respective duties of The Quartermaster General, The Surgeon General, and the Chief of Transportation in connection with food service on transports and hospital ships. Toward the close of hostilities War Department and Army Service Forces directives were issued to clarify this situation.[74] The ASF directive stated that The Quartermaster General was responsible for formulating policies regarding the supervision, inspection, organization, and operation of facilities pertinent to food service on vessels, except hospital ships; The Surgeon General had a similar responsibility in regard to the feeding of patients on hospital ships. The directive applied not only to Army transports but to other troopships in Army service. The Chief of Transportation was directed to supervise the conduct and operation of food service activities on all such vessels, in accordance with the policies, methods, and standards prescribed by The Quartermaster General and The Surgeon General.

The Chief of Transportation believed that the food service on ships and at the staging areas deserved special consideration as an important factor in maintaining morale among troops destined overseas. Accordingly, he arranged with The Quartermaster General early in 1944 for the transfer of an experienced food service officer to the Transportation Corps to act

[70] AR 55-420, pars. 6 and 8, 1 Sep 42, sub: Transport and Harbor Boat Messes; AR 55-345, par. 2*b*, 11 Nov 44, sub: Steward's Dept.

[71] ASF Cir 45, 1 Jul 43.

[72] TC Cir 80-24, 31 Aug 45, sub: Food Service Programs Aboard Army Transports, etc.

[73] Conf, author with Harold H. Beattie, 30 Jan 48, OCT HB Port and Field Agencies Div Mess Adviser.

[74] WD Cir 149, Sec. IV, 21 May 45; ASF Cir 235, Pt. 1, par. 5, 22 Jun 45.

as mess adviser.[75] That officer found that the staging areas, which at that period were processing large numbers of troops, consumed all of the time he was able to devote to inspections. Consequently he was given an assistant in August 1944, whose chief duty was to inspect transport messes, report deficiencies to the Office of the Chief of Transportation, and recommend improvements.

Armament and Gun Crews

Although the question of guns and gun crews for Army vessels had been before the War Department and the Navy since November 1940, adequate preparation had not been made when the Japanese attacked Pearl Harbor.[76] Consequently, in the early weeks of the war considerable confusion attended both the installation of armament and the provision of gun crews, or armed guards as the Navy called them. Initially it was understood that the Navy would provide the armament and that the Army would provide detachments from the Coast Artillery Corps to man the guns.[77] It developed that the Navy, which was responsible for arming privately owned American merchant vessels and which also armed numerous foreign vessels, was short of equipment, and the Army undertook to make up the deficit so far as its own transports were concerned.[78] Army sources were unable to furnish the prescribed equipment in many instances and some vessels were not capable structurally of taking normal armament; therefore considerable improvisation was necessary in order that ships might sail without delay and with a reasonable degree of protection. The Western Defense Command reported that the necessity of providing armament for vessels sailing from the Pacific coast had created a serious shortage of weapons in that command.[79]

In the midst of the confusion regarding the installation of armament, the Navy, without warning to the Army, decided to man the guns which the Navy had installed on Army vessels, with the result that both Army and Navy gun crews were assigned to certain ships.[80] The Army requested that the Navy order be rescinded and that Navy crews be withdrawn pending further consideration of the matter. The Navy Department complied but instructed its personnel at the ports that in the future Navy armed guards would be furnished wherever Navy guns were installed. At San Francisco, where the situation was particularly acute, the Army port commander found it expedient to place mixed gun crews on some vessels. G–4 directed that this practice be

[75] Maj. Edward O. Matthews was transferred 17 Jan 44 and attached to the Port and Field Agencies Div OCT.

[76] Ltr, Acting SN for SW, 13 Nov 40; 2d Ind QMG, 25 Nov 40; Memo, ACofS G–4 for CofS USA, 30 Nov 40; Memo, SW for SN, 3 Dec 40, sub: Degaussing and Arming Army Transports. All in AG 573.9 (11–13–40).

[77] Memo, C of Trans Br G–4 for Port Comdrs, 19 Dec 41, sub: Arming Transports and Chartered Vessels, G–4/29717–50; Memo, C of Trans Br G–4 for CG SFPE, 7 Jan 42, G–4/29717–51.

[78] Memo, C of Trans Br G–4 for ACofS G–4, 22 Dec 41, OCT HB Gross Day File; Ltr, SN to Chm of Mar Com, 3 Feb 42, sub: Arming Foreign Vessels, G–4/29717–50. See Morison, *The Battle of the Atlantic*, App. III, for statistics of U.S. and foreign vessels armed.

[79] Memo, ACofS G–4 for CG's NYPE and SFPE, 23 Dec 41, sub: Army Transports; Memo, CG WDC for CG GHQ, 31 Jan 42, sub: Armament for Ships; Memo, C of Trans Br G–4 for CG SFPE, 17 Feb 42. All in G–4/29717–50.

[80] Memo, C of Trans Br G–4 for CG SFPE, 8 Jan 42, sub: Gun Crews, G–4/29717–51; Memo, CofS USA for CNO (Stark), 10 Jan 42, G–4/29717–51; Telg, Nav Dept to Naval Dists, etc., 17 Jan 42, OCT HB Wylie Armament.

discontinued; that insofar as the Navy could provide full crews it should be permitted to do so but that otherwise the Army should provide full crews.[81]

In July 1942 the Army, which by then had placed gun crews on more than seventy vessels, inquired as to the possibility of the Navy's assuming the entire responsibility and was informed that since the shortage of naval armed guards had been relieved, such guards could be provided for all Army transports. The War Department then directed that the Coast Artillery detachments be replaced by Navy personnel as rapidly as this could be accomplished.[82]

The relationship between the naval armed guards and the civilian officers on Army transports caused some concern. In December 1942 the commander of the San Francisco Port of Embarkation reported that this relationship long had been a matter of controversy, with resulting lack of discipline. In reply the Chief of Transportation pointed out that their respective jurisdictions were adequately defined in the regulations.[83] He indicated that the Navy regulation, which was incorporated by reference in a recently issued Army Regulation (AR 55–330, paragraph 5, 1 December 1942), made the commander of the armed guard subject to the orders of the master in all matters pertaining to the internal organization of the ship, including matters of conduct, dress, and leave. The military discipline of the armed guard, on the other hand, was to be administered by its commander, and the members of the armed guard were not to be required to perform any duties except their military duties. The Chief of Transportation also explained that the commanding officer of troops, who had been mentioned in the San Francisco report, had no authority whatsoever over the armed guard, and stated that it was not considered advisable to suggest such an arrangement to the Navy. He further stated that the Navy Department informally had recognized that, in view of the paramount position of the master affecting the internal organization and safety of the ship, in an extreme case of disobedience on the part of the commander or members of the armed guard the master might be justified in taking action on the spot to the extent of placing the recalcitrants in confinement.

Other reports regarding jurisdictional and disciplinary disputes arising between officers of the civilian crews and the naval armed guards were received by the Chief of Transportation, but they were not numerous. On the other hand, the personal relationships between civilian seamen and the enlisted men of the naval armed guards frequently were troubled. During the early part of the war, according to a Navy source, 30 percent of the armed guard officers reported friction.[84] The dissimilar responsibilities of these groups, the disparity in the rates of compensation, and the differing conceptions of their responsibilities toward the ships on which they were employed were basic causes of antagonism. Nevertheless, as time went on and civilian and naval personnel became accustomed to working side by side the relationship improved.

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[81] Memo, CG SFPE for C of Trans Br G–4, 21 Jan 42, sub: Arming Vessels; Memo, C of Trans Br G–4 for CG SFPE, 4 Feb 42. Both in G–4/29717–51.

[82] Memo, Asst Opns Off OCT for CofT, 9 Jul 42; Memo, ACofS for Opns SOS for VCNO USN, 30 Jul 42; Memo, OCNO for ACofS for Opns SOS, 11 Aug 42; Memo, TAG for CofT, 4 Sep 42. All in OCT 322 CA Trans Det.

[83] Memo, CG SFPE for CofT, 21 Dec 42; Memo, CofT for CG SFPE, 24 Feb 43. Both in OCT 560.1 Army Vessels.

[84] Morison, *Battle of the Atlantic*, p. 299.

Radio Service and Radar

Under the regulations the radio operators on the Army's ocean-going vessels might be either enlisted men assigned by the Signal Corps or commercial operators employed by the home port commanders.[85] But the regulations also provided that instructions regarding the use of radio equipment aboard the transports would be issued by the Chief of Naval Operations, and a Navy directive promulgated soon after our entry into the war provided for the assignment of Navy communication liaison groups.[86] These groups normally would consist of a commissioned officer, three radiomen, and three signalmen. In view of the scarcity of trained naval radio personnel, however, it was provided that when Signal Corps or commercial operators were retained, they would be counted as members of the communication liaison groups, provided at least one Navy radioman was assigned to each transport.

Although this Navy directive required only that one Navy radioman be installed on each Army vessel, reports from San Francisco and Seattle disclosed that the Twelfth and Thirteenth Naval Districts were assigning more.[87] Because of limited accommodations on the vessels and the number of naval personnel assigned, it was necessary sometimes to remove the Signal Corps personnel. The Army ports of embarkation indicated that they had found the Signal Corps operators fully competent to handle radio communications according to Navy requirements and that the assignment of naval operators was a waste of manpower. After consideration of these arguments, the Chief Signal Officer and the Chief of Transportation concurred in the view that, since Navy radio procedure was used on Army transports and only Navy radio stations were authorized to communicate with the transports, it was desirable that Navy radiomen be carried and that they be permitted to stand watch.[88] Nevertheless, a revision of the Navy directive issued soon thereafter explicitly stated that Navy personnel would be assigned only to complete communication personnel complements, not to replace Signal Corps and commercial operators.[89]

The Navy directive contemplated that, as it became available, naval communication personnel would be placed not only on Army vessels but on all U.S. merchant vessels of 1,000 gross tons or more. This did not eventuate, however, and in May 1944 a new plan was agreed on by the Navy, the Army, and the War Shipping Administration.[90] It provided that "the present practice" of assigning Army radio technicians to Army transports would be continued. WSA vessels carrying 250 or more troops were to be assigned either Army or Navy radiomen, according to the service to which the vessels were allocated when the assignments were

[85] AR 30-1160, Ch. 2, 30 Nov 39; AR 55-360, 17 Nov. 42.

[86] Memo, CNO for Naval Dists, etc., 24 Jan 42, sub: Com Liaison Groups—U.S. Flag Merchant Vessels and U.S. Army Transport Vessels, OCT 221 Army Vessels.

[87] Msg, Thirteenth Naval Dist to VCNO, 4 Sep 42; Memo, Port Dir Thirteenth Naval Dist for VCNO, 19 Nov 42; Memo, CG SFPE for CSigO SOS (through CofT), 21 Dec 42; Memo, Port Sig Off SPE for CSigO SOS, 6 Feb 43. All in OCT 221 Army Vessels.

[88] 1st Ind, CSigO for CG SOS, 21 Dec 42; Memo, CofT for CG NYPE, 9 Mar 43 (similar letters to other ports); 4th Ind, CSigO SOS for CofT, 10 Mar 43. All in OCT 221 Army Vessels.

[89] Memo, VCNO for Dir BuPers and Naval Dists, 30 Mar 43, sub: Com Liaison Pers, OCT 221 Army Vessels.

[90] Memo, CNO for Naval Dists, 6 May 44, AG 220.3 (22 May 44); WD Memo W55-44, 23 Jun 44, sub: Assignment of U.S. Army Radio Technicians or Navy Radiomen.

made, and Army and Navy personnel were not to be assigned to the same vessels at the same time. All WSA cargo vessels were to be assigned commercial radio operators, regardless of their allocation. The Navy directive on this subject stated that when commercial operators were not available Navy operators would be assigned to cargo ships; it also stipulated that Navy radio personnel might be assigned to any vessel at the discretion of the Chief of Naval Operations.

In June 1943 it was arranged that emergency radio rooms would be installed on the troop transports which were being provided for Army use by new construction and by the conversion of existing cargo vessels.[91] The emergency rooms were located in the after parts of the ships within the hulls, where they would be least subject to damage by enemy action. The radio equipment installed in them did not have the range required for the regular radio installations on transports but was adequate for emergency purposes. These rooms were intended for use only when the regular communications equipment was out of service.

Although earlier efforts had been made to have Army troop transports provided with radar equipment for aiding navigation, this end was not accomplished until 1945, and installations had been made on only a few of the transports when the war ended. The provision of seaborne radar equipment rested entirely with the Navy, for under a 1942 agreement between the Army and the Navy the Signal Corps confined its activities to air and ground equipment. In April 1943 the Transportation Corps approached the Navy on this subject and was informed that there was not enough radar equipment to permit installation on Army transports.[92] A further request was made in November 1943, with the same result. In March 1944 the Navy announced that its policy did not permit the installation of radar in merchant vessels, because operation by civilian crews would jeopardize security on equipment which was believed to be superior to that of the enemy and there was not enough qualified naval personnel to permit its use for this purpose; also that materials, facilities, and manpower were inadequate to meet the military requirements.[93]

In September 1944, after conversations with Navy representatives, the Chief of Transportation furnished the Navy with a list of Army troop transports, requested that radar be installed as soon as it became available, and stated that military operators would be assigned to the vessels with the understanding that the Navy would provide instruction in the handling of radar to those requiring it. At the same time he provided the Navy with a list of War Shipping Administration troopships allocated to the Army, for which radar equipment was desired. But the Navy still was unwilling to commit itself to this proposal, and in stating its position stressed the security aspect and the fact that on Navy ships radar was part of the armament, its use as a navigational instrument being incidental.[94]

In January 1945 the Navy announced a plan to establish pools of radar equipment

[91] Memo, OCT for U.S. Secy CCS, 10 Jun 43, sub: Conversion of Transports, OCT 564 Army Vessels; Conf, author with Geo. A. Anthony, Maintenance and Repair Br OCT, 5 Aug 48, OCT HB PE Gen Transport Radio Sv.

[92] Memo, CofT for CG NYPE, 8 Apr 43, sub: Radar, USAT *James A. Parker*, OCT 240–900 James A. Parker.

[93] Memo, VCNO for Deputy Dir ODT, with copies to WD, WSA, etc., 29 Mar 44, OCT 413.44 Troop Transports.

[94] Memo, CofT for CNO USN, 3 Sep 44; Memo, CNO for CofT, 9 Oct 44. Both in OCT 413.44 Troop Transports.

under the control of the commanders of the Eastern and Western Sea Frontiers for installation on fast, independently routed Army and WSA transports, the entire program to be limited to 150 sets of equipment and 450 men.[95] In April further details as to the execution of the plan were announced. By 7 July, however, radar installations had been completed on only six Army transports; installations on sixteen others were under way or had been arranged for. On that date a radiogram from Secretary of War Stimson, then en route to the Potsdam Conference on a transport which had been passing through heavy fog, expressed surprise that so few Army vessels had been provided with radar, in view of the large number of troops carried and the fact that Navy transports were so equipped, and requested a confidential report on the subject and advice as to steps being taken to remedy the omission.[96]

Thereafter, the installation of radar on troopships was expedited. The Navy reversed an earlier decision to include high speed tankers among the merchant ships to receive such equipment.[97] The Transportation Corps renewed its effort to have radar installed on all War Shipping Administration troop transports allocated to the Army and informed the ports of embarkation that if WSA should refuse to bear the cost of installation, the Army would do so.[98] Co-ordination of the installation program was assigned to the Chief Signal Officer, who designated the signal officers at the ports of embarkation as local co-ordinators.

Assignment and Operation of Small Boats

Aside from the ocean-going vessels referred to above, the Army required small boats and other floating equipment for many purposes. The types with which the Chief of Transportation was concerned included tugs, barges, lighters, floating cranes, fireboats, launches, marine tractors, and dories for harbor use; tugs, barges, patrol boats, passenger and cargo vessels for coastwise and interisland service; rescue and airplane retrieving vessels for the Army Air Forces; mine laying and target vessels for the Coast Artillery Corps.[99] These units were under 1,000 gross tonnage and 200 feet length; they included both self-propelled and nonpropelled types. As a class they were known as "small boats"; sometimes they were referred to as "harbor boats," but that designation was not accurate, since many types were built expressly for coastwise and interisland service.

In December 1940 the Army had a total of 386 such boats. By the end of the war the fleet under the control of the Chief of

[95] Memo, CNO for Comdrs WSF and ESF, 10 Jan 45, sub: Radar for use as Navigational Aid on Fast Troop Transports; Memo, CNO for BuPers and BuShips, 17 Apr 45. Both in OCT 413.44 Troop Transports.

[96] Rad, Stimson for Marshall, 7 Jul 45, CM-IN 6344; Memo, CG ASF for ACofS OPD, 11 Jul 45, OCT 413.44 Troop Transports, reviews TC effort to obtain radar from November 1943.

[97] Memo, BuShips for Comdrs WSF and ESF, etc., 7 Jul 45, OCT 413.44 Troop Transports.

[98] Ltr, C of Water Div OCT for WSA, 19 Jul 45; Memos, CofT for the several PE's, 1 Aug 45, sub: Installation of Radar Equip; Memo, CSigO for CG's of PE's, 10 Aug 45, sub: Installation of Nav Aids. All in OCT 413.44 Troop Transports.

[99] AR 55-510, par. 1, 9 Oct 42, sub: Harbor Boat Service. General characteristics of vessels shown in Report of Army Small Boat Construction, 1 July 40 to 31 May 45, issued by WD, 18 Dec 45, in OCT HB Water Div Small Boats. See also Critchell Rimington, "The Army's Navy," *Yachting* (March 1943).

Transportation had grown to 12,466 vessels.[100] Of the latter number, 3,413 were assigned to commands in the zone of interior, 7,791 had been dispatched or were assigned to oversea commands, 67 were assigned to lend-lease purposes, 995 were in the zone of interior awaiting assignment, and 200 had been reported as available for disposition. These figures, and the discussion in this section, relate only to vessels subject to assignment by the Transportation Corps; they do not comprehend Navy-procured landing craft, Ordnance-procured amphibious trucks, specialized vessels procured by the Board of Engineers for Rivers and Harbors, or vessels acquired by the theater commanders from oversea sources.

In the zone of interior the largest users of small boats naturally were the ports of embarkation. Their varied marine activities, sometimes involving widely separated facilities, called for numerous craft for the transportation of personnel and supplies within the harbors and the handling of cargo at shipside. On 1 August 1945 there were 377 units of such floating equipment under assignment to the New York port commander, 275 to Seattle, 228 to San Francisco, 164 to New Orleans, 125 to Boston, and lesser numbers to the other ports of embarkation, subports, and cargo ports, making a total of 1,337. The equipment assigned to the Seattle Port of Embarkation included that utilized in the Alaska Barge Service, established in 1942 to transport supplies from Seattle and Prince Rupert over the inside passage to Juneau, Skagway, and Excursion Inlet.[101] A total of 815 units was assigned to the seaboard service commands and defense commands for the utilization of installations within their jurisdictions, 768 units were assigned to Army Air Forces headquarters, and 468 to the Chief of Engineers, some of which were actually utilized overseas. Twenty-five boats were assigned to other government agencies.

Small boats were required by the oversea theaters not only for port operation and the transportation of men and supplies between ports and areas, but also for the support of invasion operations. In the spring of 1942, when preparations were being made for a possible invasion of the European Continent in the fall of that year, the military planners got their first inkling of the extent of the marine requirements for such an operation.[102] The marine procurement program was still in its infancy, and to supplement such new craft as could be counted on, a survey of river and coastwise vessels was made to determine how many would be suitable for cross-Channel service.[103] The result of this survey was not encouraging, and the lack of adequate floating equipment was one of the factors which

[100] Gross final rpt, p. 72. Classification by designs and assignments is shown in statistical table, Harbor Boats in Service, in Storage, and Intransit, 1 Aug 45, OCT HB Water Div Small Boats.

[101] Memo, CofT for CG SOS, 15 May 42, OCT 544.2 Alaska; Min, Port Comdrs Conf, Boston, 30 Aug 43, pp. 207, 209, in OCT HB PE Gen Port Comdrs Conf. Supplies were distributed inland from Juneau and Skagway and were transshipped to other Alaskan ports from Juneau and later from the newly constructed port at Excursion Inlet.

[102] CCS 15th Mtg, par. 7, 7 Apr 42; CCS 17th Mtg, par. 4, 28 Apr 42; Memo, Gen Somervell for Admiral King, 13 Apr 42; Memo, Col Wylie for Gen Gross, 13 May 42, sub: Cross-Channel Boats. Last two in OCT HB Gross European Theater Boats.

[103] Memo, Wylie for Gross, 29 Apr 42, sub: Procurement of Small Fast Passenger Ships, OCT HB Wylie Staybacks; Memo, Gross for Somervell, 2 Jul 42; Memo within WSA, Ralph Keating for the Administrator, 7 Aug 42. Last two in OCT HB Gross European Theater Boats.

made a cross-Channel operation in 1942 appear impractical.[104] When the invasion actually took place two years later it was with the benefit of a mature and carefully planned marine procurement program. On 1 April 1945, just before the German surrender, the Transportation Corps had 1,845 boats of this category in the European theater, including 887 barges, 295 marine tractors, 287 towing launches, 95 other launches, 167 tugs, 45 tankers, and 50 floating cranes.[105] Naturally the British contributed heavily of their small boats for operations in Europe, and many landing craft and other small vessels of the U.S. Navy were utilized in the assault on the Normandy coast.

The need for floating equipment was especially critical in the Pacific, because each move toward Japan was over a water route and because so many military operations involved the landing of men and supplies at undeveloped beachheads or primitive ports. The first-mentioned circumstance created a demand for both large and small vessels for operation between bases within the theater; the second created a need for harbor craft to discharge vessels lying offshore. To illustrate the latter point: a study prepared by the Joint Logistics Plans Committee during the summer of 1944 concerning lighter equipment for planned operations in the Pacific enumerated 89 ports and beachheads to be used, of which only 11 would afford facilities for docking transports.[106]

The theater commander in the Southwest Pacific Area foresaw these needs, and his accumulated requisitions for small boats ran into large figures. In addition to such used boats as could be acquired locally, more than 3,100, mostly the smaller types, were constructed in the theater for the Transportation Corps and 2,504, including the larger types, were constructed in the zone of interior and assigned to the theater.[107] Of the latter number, 1,896 boats were actually in the theater on 1 August 1945, including 708 barges and lighters, 209 freight supply boats, 260 towing launches, 208 other launches, 171 tugs, and 180 marine tractors. Late in 1943 Admiral King expressed the fear that the Transportation Corps procurement program to meet SWPA requirements was wasteful of both materials and personnel and recommended that it be referred to the Joint Logistics Committee for study. That committee approved the program and proposed measures for meeting the problem of manning; soon thereafter the entire TC marine procurement program received the sanction of the Joint Production Survey Committee.[108]

Since the Pacific Ocean Areas was a Navy command it received most of its small boats through Navy channels, but on 1 August 1945 the Chief of Transportation

[104] TC was procuring landing craft at that time, but since they were essentially combat vessels, their procurement was made exclusively a Navy function in September 1942. See Memo, ACofS OPD for CG SOS, 14 Sep 42, OPD 560 (Harbor Boats and Harbor Boat Service) Sec 3 (81–139).

[105] Harbor Boats in Service, in Storage, and In-transit, 1 Apr 45, OCT HB Water Div Small Boats.

[106] An. A to App. A of JLPC paper, Lighter Equipment for Port Operation, OCT HB Topic Army-Navy Joint Logistics.

[107] Harbor Boats in Service, 1 Aug 45, cited n. 100; OCT HB Monograph, U.S. Army Trans in Southwest Pacific Area, 1941–47, pp. 368–80, gives details about SWPA small boat program.

[108] JCS 644, 24 Dec 43; JCS 644/1, 14 Mar 44; JCS 573/3, 20 May 44. For exposition of TC position regarding construction and manning see Memo, CofT for Joint Logistics Com, 5 Jan 44, OCT HB Gross Day File.

BOATS BUILT FOR THEATER SERVICE. *Motor tow launches, 46-foot, in wet storage at the Los Angeles Port of Embarkation awaiting assignment to Pacific theaters (top). Interisland supply vessel, 168-foot (bottom).*

had 764 units under assignment to that theater. The other principal oversea assignments of TC floating equipment on that date were 1,815 to the European theater, 912 to the Alaska command, 510 to the Panama Canal command, 458 to the Asiatic theater (China, Burma, India), 309 to the Mediterranean theater, and 221 to the Antilles command.

Marine equipment was acquired by the Chief of Transportation through purchase, charter, or new construction. The old vessels which were purchased or chartered from private owners or from other government agencies were a relatively small proportion of the total, but they were welcome additions to the fleet in view of the limited number of new craft that could be built. The total of 1,647 units acquired during the fiscal year 1945 included 1,422 new vessels delivered under TC contracts, 121 acquired by purchase through the War Shipping Administration, 77 chartered from the Office of Defense Transportation, and 27 transferred from the Corps of Engineers.[109]

All requests for vessels needed by the various elements of the Army were made to the Chief of Transportation.[110] Such requests were passed on first by the Water Division, which checked the validity of the need and the suitability of the designs. Approved requests then were sent to the Director of Supply, who either contracted for the construction of new vessels or undertook to find suitable used equipment.[111] The distribution of used vessels to the various government agencies requiring them was controlled by a committee representing the Army, the Navy, and the Maritime Commission (later, the War Shipping Administration), which was established during the early weeks of the war as an element of the Strategic Shipping Board.

The program of small boat construction which was administered by the Director of Supply was a major undertaking. The procedures and problems involved in such procurement will be dealt with in some detail in another volume of Transportation Corps history. Here it will suffice to state that during the fiscal years 1942 through 1945 marine equipment with an aggregate value of $833,991,000 was completed under contracts let by the Army.[112] The great increase in the volume of procurement during the war period is seen in the fact that whereas the value of marine equipment completed and accepted during the fiscal year 1942 was $34,368,000, during the fiscal year 1944 it was $371,674,000.

The Transportation Corps' late entrance into the market for marine equipment, after construction facilities and materials had been heavily committed under Navy and Maritime Commission contracts, together with the general scarcity of materials, equipment, and labor, placed it at a disadvantage, and in the beginning its progress in marine procurement was slow. In November 1943, in connection with his inquiry into the progress of the troopship conversion program, the Director of War Mobilization informed the Secretary of War that he was

[109] Annual Rpt, Water Div OCT, FY 1945, p. 13, OCT HB Water Div Rpts.

[110] AG 561 (1-30-42) MO-D-M, 31 Jan 42, sub: Acquisition of Vessels under 1,000 tons; WD Memo W55-9-42, 4 Dec 42, sub: same, OCT HB Water Div Small Boats.

[111] Memo, Water Div OCT for Wardlow, 28 Nov 42, OCT HB Water Div Small Boats; Memo, C of Water Div OCT for ACofT for Supply OCT, 9 Dec 43, sub: Procurement of Used Vessels, OCT 561.1.

[112] OCT HB Monograph 28, Table A. The figure includes some Marine equipment procured by QMC during FY 1942. It does not include equipment procured by the Navy and Maritime Commission for TC account, nor does it include marine supplies.

"somewhat persuaded" that the deletion of marine procurement from TC functions would leave the corps in a better position to cope with its other heavy responsibilities.[113] The Secretary of War in reply argued strongly that if the Army was to be in a position to respond promptly to the requirements of the commanders in the field, the procurement of equipment to meet those requirements should be lodged in the agency charged with the review and approval of the design and use of such equipment—in other words, the Transportation Corps.[114] Such procurement remained a TC responsibility throughout the war.

The assignment of appropriate floating equipment to meet the needs of zone of interior installations and oversea commands was a function of the Chief of Transportation, which he delegated to the chief of his Water Division, who in turn entrusted the details to the Harbor Boat Branch.[115] Two exceptions are to be noted. Throughout the war the assignment of mine laying and mine tending vessels was handled by the Coast Artillery Corps. In the early part of the war the Chief of Transportation assigned Army Air Forces vessels in accordance with AAF requests, but from September 1944 this function was performed directly by AAF.[116] Although equipment was contracted for on the basis of specific requests from the field, the Chief of Transportation did not commit vessels in advance of their completion, since conditions were changing continually and it was considered advisable that each unit be assigned where it was most urgently needed at the time it became available.[117]

The Harbor Boat Branch endeavored to maintain up-to-date records on all vessels under its jurisdiction, showing the characteristics of the vessels and their employment. It was fairly successful as regards those which remained in the zone of interior but found it impossible to hold the oversea commands accountable for the vessels assigned to them. Ports of embarkation and other zone of interior installations were instructed to submit reports on the operating expenses and the activities of the harbor boats which they utilized, but in view of the pressure under which the installations worked and the large amount of detail involved in compiling such reports the regulation was not enforced.[118]

The Transportation Corps had differing degrees of responsibility for the operation and maintenance of the Army's small boats. Vessels assigned to TC installations in the zone of interior were entirely its responsibility. They were manned with civilian crews, supplied, and maintained by the installations in accordance with policies established by the Chief of Transportation. Vessels assigned to other installations in the zone of interior, except the specialized Coast Artillery and Air Forces vessels, were manned with civilians, supplied, and maintained by those installations under the supervision of the service commanders and in accordance with TC policies, except that the

[113] Ltr, 3 Nov 43, OCT 564 Army Vessels Oct 43–May 44.

[114] Ltr, 23 Nov 43, OCS 570, 1943.

[115] TC Pamphlet 1, Org Manual, Sec. 301.00, par. 11, April 1944, OCT HB Org Manuals; AR 55–305, 10 Oct 42.

[116] WD Cir 388, par. 1f, 27 Sep 44; AAF Reg 65–89, par. 2 (2), 12 Oct 44; Memo, CG AAF for CofT, 19 Dec 42; 1st Ind, CofT for CG AAF, 13 Apr 43; 2d Ind, CG AAF for CofT, 31 May 43. Last three in OCT 563–900 Cargo Vessels 1942–43.

[117] 1st Ind, CofT for SPE, 22 Apr 43, OCT 561.4.

[118] WD Cir 327, Sec. 2, 16 Dec 43; Conf, author with Maj H. M. Miles, 18 Aug 48, OCT HB Water Div Small Boats.

Transportation Corps controlled repairs which were not performable by the crews and supplied spare parts and technical advice when needed.[119] Mine planting and mine tending vessels were manned with military crews, operated, and maintained by the Coast Artillery Corps, except that the Transportation Corps supplied spare parts, gave technical advice, and took responsibility for the heavier maintenance work.[120] AAF rescue and retrieving vessels employed in the zone of interior were operated and maintained in a similar manner until September 1944 when AAF was assigned complete responsibility, with the privilege of calling on the Chief of Transportation for technical advice and spare parts and for aid in arranging for the use of repair facilities.[121] Vessels employed in the oversea commands were solely the responsibility of the oversea commanders, except that the Chief of Transportation established policies in regard to crews and maintenance and supplied needed spare parts and equipment. Some of the vessels stationed overseas were manned with civilian crews, some with military crews, and some with Coast Guard personnel.

Most new boats, except the specialized Coast Artillery and Air Forces craft, were delivered on completion to ports of embarkation, by which they were dispatched to the assignees or held in wet storage pending assignment. In either case the vessels received a thorough processing at the ports to prepare them for efficient operation. Because of hasty construction as well as changing ideas regarding design and equipment, the repair work performed at the ports was considerable.[122] Sometimes, when vessels proceeding under their own power to oversea stations passed through two or more ports, each port undertook to make the repairs and alterations which it considered necessary. In an effort to eliminate unnecessary work of this nature, a representative of the Water Division visited the ports of embarkation and listed the repairs and alterations customarily made on each type of craft. From this information a master list was prepared, including all changes considered necessary to place the vessels in proper operating condition. These changes were incorporated in the construction contracts subsequently let, and the ports were instructed to make no further alterations on vessels delivered under such contracts without prior approval of the Water Division. The ports were also instructed to limit the repairs and alterations of vessels delivered under old contracts to those contained in the master list.[123]

Manning of Small Boats

Early in 1943 it was apparent that extraordinary means would have to be employed to provide crews for the several thousand

[119] TC allocated repair work to ports of embarkation, service commands, or commercial repair shops according to circumstances. See AR 55–510, par. 2, 9 Oct 42.

[120] See Memo, CofT for CG 9th SvC, 9 May 44; 1st Ind, CG 9th SvC for CofT, 19 May 44. Both in OCT 564 9th SvC.

[121] WD Memo W55–28–43, 25 Jun 43, sub: Maintenance of AAF Floating Equipment, OCT HB Water Div Small Boats; AAF Reg 65–89, par. 3, 12 Oct 44. AAF used civilian crews during the early part of the war, but began replacing them with military crews in 1943. See Memo within Maintenance and Repair Br OCT (Hoch for Warren), 18 Mar 43, OCT HB Water Div Small Boats; also Memo, CG AAF for CofT, 11 May 43, OCT 231.8 New Orleans.

[122] See Memos, Maintenance and Repair Br (Warren) for C of Water Div OCT, 21 and 23 Jun 43, OCT 564 Army Vessels, concerning deficiencies in newly constructed vessels.

[123] Mtg of Supts of Water Divs, Chicago, 7 Jul 44, pp. 12, 13, OCT HB Water Div Misc.

units of floating equipment for which the Transportation Corps had contracted. In May the Water Division estimated that 10,000 marine officers and seamen would be needed for the small boats that would be delivered in the United States during the next twelve months, and at about the same time General MacArthur indicated that 4,000 would be required for boats being built in Australia.[124]

Several methods were adopted to provide this personnel. Since it was becoming increasingly difficult to engage civilian crewmen and since military crews were desirable for certain types of vessels which served in the forward areas, the Transportation Corps began the training of harbor craft companies at the Charleston Port of Embarkation in March 1943, and later in the year moved this activity to Camp Gordon Johnston, Carrabelle, Fla., where it could be conducted on a broader scale. A total of 12,782 officers and men were trained under this program in the zone of interior, and companies embracing more than 3,000 were activated overseas.[125] During the summer of 1943 an intensive campaign to recruit civilian marine personnel was launched, in which 40 government and private agencies and 44 marine publications were called upon for aid. Concurrently a Marine Officer Cadet School was established at St. Petersburg, Fla., and schools to provide additional training for civilians already holding licenses in the deck and engine departments were opened at the ports of embarkation at New Orleans, New York, and San Francisco. About 20,000 civilians were employed on small boats at the end of the war. The need for military crews in the Southwest Pacific had not been fully met in the spring of 1944, and it was decided to place Coast Guard crews on some of the boats operating in the forward areas of that theater. In August 1945 there were Coast Guard crews on 250 Army boats, totaling 6,851 officers and men.[126]

The most critical need was for qualified licensed officers. The Marine Officer Cadet School graduated 1,073 civilian junior deck officers and 1,107 civilian junior engine officers—a total of 2,180—during its period of operation, August 1943 to April 1945.[127] The site had been used by the United States Maritime Service, an agency of the War Shipping Administration, for training purposes, and it was arranged that the incumbent training staff should remain. The Transportation Corps supplied additional marine equipment, built barracks, provided uniforms and subsistence, and reimbursed WSA for its out-of-pocket expenses. The cadets were selected from among the graduates of the several WSA training institutions, after very severe tests. So carefully were these cadets chosen that only 103 of the 2,283 who started the course failed to complete it satisfactorily. About 750 of the graduates were commissioned in the Army and were assigned to TC harbor boat companies, and the remainder were

[124] Memo, C of Civ Pers Div OCT for Exec Off OCT, 1 Aug 43, OCT HB Ind Pers Div Civ Marine Pers.

[125] OCT HB Monograph 26, pp. 57–66, Exhibit II. This military training program will be discussed in detail in another volume of TC history.

[126] JCS 644/1, 14 Mar 44; Memo by Joint Secretariat, 22 Mar 44, approving JCL recommendations with slight modifications, OCT 231.8 Army Vessels; Memo, Acting Comdt USCG for CofT, 20 Aug 45, OCT 231.8 Army Vessels. OCT HB Monograph, U. S. Army Trans in Southwest Pacific Area, 1941–47, pp. 608–36, discusses marine personnel problems in SWPA, including small boat crews.

[127] Rpt, Ind Pers Div OCT, FY 1945, Section on Tng Marine Offs, OCT HB Ind Pers Div Gen; Conf, author with Col Alexander Corey, 24 Aug 48, OCT HB Ind Pers Div Civ Marine Pers.

sent to the Civilian Marine School at New Orleans for further training as civilian officers.[128] The schools at New York and San Francisco, which were in operation only about one year, provided final training and tests for young civilian marine officers who were shipped overseas from those ports. All civilian training activities were under the general supervision of the Industrial Personnel Division in the Office of the Chief of Transportation.

Initially, an effort was made to place permanent crews on new vessels when they were delivered at the contractors' plants, but because of the scarcity of personnel qualified for oversea service and the unwillingness of many civilian seamen to sign the articles of a vessel whose area of employment had not been determined, it was decided during the spring of 1943 to utilize delivery crews for moving vessels to the ports of embarkation and to reserve the assignment of permanent crews until the boats were ready to go into service.[129] In June the respective ports were furnished lists of vessels which were to be delivered to or through them and were instructed to establish delivery crew pools and recruit as many men for these pools as might reasonably be required.[130] Thereafter such lists were distributed at intervals in accordance with information furnished by the Director of Supply, and the ports were requested to confirm the delivery dates with the contractors, in order that crews would be on hand to take over the vessels as soon as they were ready.[131] Beginning in the spring of 1944 the Army Air Forces provided delivery crews for vessels procured by the Transportation Corps for AAF use.[132]

The delivery pools, or harbor boat cadres, not only provided reservoirs from which crews could be drawn as required but also afforded an opportunity for training men who were not fully qualified when they were employed. Though these cadres were utilized principally in providing delivery crews, when occasion required they were drawn on also for permanent crews.[133] Authorized ceilings for harbor boat cadres were set by the Chief of Transportation, but the ports were instructed to employ at a given time only as many men as they believed would be required in the near future. Therefore the size of the cadres varied as the prospective deliveries of vessels fluctuated. Theoretically such cadres were kept separate from the transport crew cadres, referred to earlier in this chapter, but qualified men were considered interchangeable in case of need.

The manning scales for harbor boats and other floating equipment were authorized by the Industrial Personnel Division in the Office of the Chief of Transportation, on recommendation of the Water Division, which in turn was guided by the experience

[128] The New Orleans school absorbed the cadet school in April 1945. Its activities are reviewed in Memo, Paul C. Grening for Acting Dir of Opns OCT, 19 Apr 45, OCT HB Ind Pers Div Civ Marine Pers.

[129] Memo, CofT for CG SPE, 27 Mar 43, OCT 231.8 Seattle. Similar memos to other ports.

[130] Memo, CofT for CG NOPE, 9 Jun 43, OCT 231.8 Harbor Boat Pers 1943. Similar memos to other ports.

[131] Memo, CofT for CG SFPE, 1 Sep 43, OCT 561.2–563.5 San Francisco. For complete directions regarding acceptance, delivery, storage, and shipment of floating equipment see TC Cir 80–15 rev., 13 Sep 44.

[132] Memo, CofT for CG AAF, 24 May 44, OCT HB Water Div Small Boats.

[133] Conf, author with Maj E. H. Buysse, 26 Aug 48, OCT HB Ind Pers Div Civ Marine Pers. Major Buysse was chief of Field Service Branch, Industrial Personnel Division, during the war.

of the ports of embarkation.[134] Because of the scarcity of competent personnel, an effort was made to limit crew strengths to the practical minimum. The chiefs of the water divisions at the ports, who were responsible for the assignment of crews, were instructed to spread experienced officers as thinly as possible, but to be sure that each vessel was "properly manned" and to notify the port civilian personnel officers if the men made available did not have the necessary qualifications.[135] The Industrial Personnel Division endeavored to maintain up-to-date lists of the civilian employees on each vessel in order to facilitate the handling of insurance claims and dependency benefits. Such information was received regularly from installations in the zone of interior, but the oversea commands reported changes in crews very irregularly.[136]

The Industrial Personnel Division, acting with the advice of the Water Division, established the basis of compensation for civilian crews. For this purpose the Army's small boats were classified as harbor boats or interisland vessels.[137] As in the case of the ocean-going vessels, wages and bonuses for small boats followed the practices in the maritime industry and the decisions of the Maritime War Emergency Board. Overtime was not paid until after the issuance of the War Department's policy governing vessels on 31 October 1942. Insofar as possible, the Army's overtime rates were based on the prevailing rates for similar types of vessels in the respective localities.[138] Where no prevailing overtime rate could be established, as frequently was the case in oversea areas, the Army rate was in accordance with Public Law 821, 77th Congress, which provided for the payment of time and a half for work over forty hours per week.

In the spring of 1943 the Southwest Pacific Area, which already had a large number of vessels employed in intratheater services, reported that great difficulty was being experienced in administering the complicated system of war bonuses applicable to the seamen who signed the usual ship's articles. Also the theater was losing the services of many experienced men who desired to return to the United States after a period in foreign waters, some claiming that the home ports from which they shipped had not made it clear that their vessels would remain overseas. These difficulties existed not only in connection with the crews of small boats but also with crews of the limited number of Army-operated ocean-going vessels permanently assigned to the theater. In order to meet the problem a new form of individual contract was developed, calling for one year of service overseas and providing for a flat payment of 100 percent of the base wage in lieu of all bonuses. This additional payment approximated the average bonus payments to seamen serving overseas under ship's articles. The individual contract gave a clearer definition of the employee's rights

134 Memo, CofT for CG NOPE, 11 May 43, OCT 231.8 Harbor Boat Pers 1943. Strength of crews authorized for various types of vessels is shown in attachment to Memo, Water Div for Dir of Mil Tng OCT, 6 Dec 43, in same file.

135 Memo, CofT for NOPE, 20 May 43, OCT 231.8 New Orleans; Mtg of Supts of Water Divs, Chicago, 7 Jul 44, pp. 14, 15, OCT HB Water Div Misc.

136 Memo, CofT for CG SPE, 5 Feb 43, OCT 231.8 Seattle; Memo, CofT for CG APO 851 N.Y., 16 Apr 43, OCT HB Water Div Small Boats; Conf with Buysse cited n. 133.

137 Rpt, Dir of Pers, FY 1944, Ind Pers Sec, p. 7, OCT HB Dir of Pers.

138 OCT Memo CPRTC 20-80, 23 Jan 43, sub: Overtime Compensation for Crew Members of Harbor and Interisland Class Boats, OCT HB Ind Pers Div Civ Marine Pers.

and responsibilities than did the ship's articles. It expressly stated that the employee was eligible for treatment by the Medical Corps and thus cleared up a disputed point which had given trouble in the past. The contract form soon was revised to provide for service over a mutually agreed period, rather than for a year.[139] Although this type of contract had been devised particularly for SWPA, it was suitable for and was extensively used in the employment of marine personnel to serve in other theaters. Alaska, it may be noted, had a special form of contract which took into account conditions peculiar to that area.

Subsequently a shorter form of individual contract, known as an agreement of enrollment, was introduced, which by reference incorporated all the pertinent provisions of the law and the Transportation Corps Marine Personnel Regulations.[140] It was used particularly in employing marine personnel who were to be put through a course of training at Transportation Corps expense before being sent overseas. From the TC standpoint the object was to attract and hold good men, build up an *esprit de corps* which could not exist among casuals, and reduce the turnover in Army crews. The inducements from the individual's standpoint included steady employment, increased skill acquired at government expense, preference in job assignments, and more rapid advancement. The contract provided that, if the employee should breach the agreement, he could be required to reimburse the government for the reasonable cost of the formal training which he had received and the cost of travel to his first duty station after enrollment. No record of breached contracts is available, but the number was small in relation to the number of enrolled employees and did not detract from the value of the plan.[141]

Civilian officers and crewmen on small boats had the same status under civil service as did the crews on the Army's ocean-going vessels. They were not required to undergo competitive examinations, their appointments were not subject to prior approval by the commission, and their compensation was not governed by the Classification Act. On the other hand, they enjoyed all the privileges of civil service employees, including the leave and retirement features. Other benefits provided for in Transportation Corps Marine Personnel Regulations were equally applicable to them.

The seamen on small boats were eligible for occupational deferments under the Selective Service Act if they were engaged in "active ocean-going service." At first this was interpreted to apply only to those engaged in coastal or offshore service, but later, in view of the difficulty of obtaining competent crews, it was permissible to request deferment for crewmen on boats assigned to ports of embarkation in the zone of interior.[142] The policy of the Chief of

[139] Contract Forms WDTC CPD #2 SWP and WDTC CPD #3 Gen (rev.), OCT HB Ind Pers Div Civ Marine Pers; Rpt, Dir of Pers FY 1944, Ind Pers Sec, p. 2, OCT HB Dir of Pers; Conf with Buysse, cited n. 133.

[140] Conf, author with Col Alexander Corey, 26 Mar 48, OCT HB PE Gen Transport Crews; Rpt, Ind Pers Div, FY 1945, p. 1, OCT HB Ind Pers Div Gen; see form, Agreement of Enrollment (rev.), 1 Jun 45, OCT HB Ind Pers Div Civ Marine Pers.

[141] Conf, author with Anthony J. Clemente, Ind Pers Div OCT, 30 Aug 48, OCT HB Ind Pers Div Civ Marine Pers.

[142] OCT Misc Ltr 56, 17 Feb 45, sub: Occupational Deferment of Employees Assigned to Harbor Boats; TC Marine Pers Cir 5, 18 Apr 45, sub: Marine Deferments. Both in OCT HB Ind Pers Div Civ Marine Pers.

Transportation, however, was not to seek deferments for marine personnel employed on vessels which were operated entirely within domestic harbors.

Proposals Regarding Marine Personnel

On 1 August 1945 the large and small vessels which were manned with civilian crews provided by the Chief of Transportation had positions for 33,846 officers and men. Of these, 14,755 were on vessels assigned to oversea stations and 19,091 were on vessels assigned to commands in the zone of interior. Broken down in another way, the total included 7,909 positions on Army troop and cargo transports, 3,508 on Army hospital ships, 10,018 on interisland vessels which were chiefly in the small boat class, 11,467 on harbor boats, and 944 on boats of the Army Air Forces.[143]

The foregoing pages have indicated some of the problems involved in providing a sufficient number of competent men to fill these positions. While the results were good under the circumstances, they left something to be desired. The number of men available for this service was severely limited by the requirements of the armed forces and the attractiveness of jobs offered by other war industries. Men with marine experience had to be employed regardless of records of irresponsibility, because experience is something for which there is no substitute. Inexperienced men had to be trained hastily and placed in positions of responsibility without adequate seasoning.

The majority of the men who served on Army transports and small boats during the war did so in a civilian status. While many arguments were offered in favor of complete militarization of crews, especially the crews on vessels assigned to the theaters, there were practical considerations to the contrary. The principal consideration was that many experienced marine officers and seamen could be utilized satisfactorily as civilians, although they would not have been eligible for military service because of age or physical limitations. Complete militarization of crews would have involved using a larger percentage of inexperienced men and would have necessitated deflecting a considerable number of young men from the fighting elements of the armed forces where youth and physical stamina are more essential.

In view of the fact that the demand for civilian marine personnel probably would be heavy in case of another national emergency, thought was given to ways and means of avoiding some of the handicaps experienced by the Army in World War II. Mr. Paul C. Grening, who served in an advisory capacity in the Water Division after long experience as a master of merchant vessels, considered the establishment of a permanent civilian organization for such personnel highly desirable.[144] Such an organization eventually would acquire traditions and prestige, would give the men a greater sense of performing an essential war service, and would improve *esprit de corps*. If the Army could furnish uniforms to the unlicensed ratings, which it did not have authority to do during World War II, that feature would add to the attractiveness of the service. While the provision of adequate and competent marine personnel to meet the greatly en-

[143] Civ Marine Pers Recapitulation, 1 Aug 45, OCT HB Ind Pers Div Civ Marine Pers. Many small boats did not require permanent crews, such as barges, lighters, dories, and row boats.

[144] Conf, author with Grening, 4 Nov 44; Memo, Grening for Dir of Opns OCT, 19 Apr 45, sub: New Orleans Trip. Both in OCT HB Ind Pers Div Civ Marine Pers.

larged requirements of war must always remain a problem, Grening believed that much could be done in advance to lighten the difficulty.

Col. Alexander Corey, Chief of the Industrial Personnel Division, who dealt with recruiting and training problems throughout the war, proposed the establishment of a system for selecting, training, and allocating personnel for manning merchant vessels, including the smaller types, separate from but similar to the selective service system under which personnel was supplied to the several branches of the armed forces.[145] The physical requirements would be less severe than those under Selective Service. Besides solving the problem of crew turnover and improving discipline and efficiency, Corey pointed out that such a plan would eliminate competition for men among the several government agencies which operate vessels and would assure distribution of the available personnel according to carefully determined requirements. It would add the dignity and prestige which this type of service does not have when it is run on a purely voluntary basis in wartime.[146]

[145] Memo to Capt R. G. Miller, Exec Office OCT, 19 Oct 45, OCT 561.4 Joint Army-Navy Shipbuilding Program.

[146] For review of various possibilities in the light of wartime experience see Memo, Gen Wylie for Gen Leavey, 6 Jan 46, OCT HB Wylie Staybacks.

CHAPTER VIII

Other Marine Operations and Problems

The operating matters discussed in the preceding chapter related to vessels which were owned by or were under bareboat charter to the Army, but the Chief of Transportation had operating responsibilities in connection with all vessels utilized by the Army, including those of the War Shipping Administration and the Navy. He was responsible for the efficient operation of the Army ports of embarkation where most of the vessels were loaded and discharged; for the efficient utilization of the ships' time and carrying capacity; and for the alteration of the vessels to adapt them to Army requirements. It is with the performance of these responsibilities that the present chapter is concerned.

Pier Operation and Stevedoring

The port operations of the Transportation Corps in the zone of interior during the latter part of the war repeatedly involved the loading in a single month of more than 400 cargo vessels carrying more than 4,000,000 measurement tons of cargo, besides 60 to 80 troop transports with varying cargo capacities.[1] The facilities and procedures for accomplishing this task were developed chiefly after we entered the war. Reports made by a representative of The Quartermaster General's Transportation Division during the spring of 1941 indicated that the equipment and techniques employed by Army ports of embarkation prior to the emergency had been antiquated and that the improvement achieved up to date of reporting had been limited.[2] The findings of an expert who was assigned to study operations at the New York Port of Embarkation early in 1941 started a cycle of improvements, which was continued after responsibility for the ports had been taken over by the Chief of Transportation in March 1942. Recognizing the importance of the loading operation in getting optimum service from the available ships and prompt dispatch of supplies to the forces overseas, General Gross kept this phase of port activity under constant observation and analysis.

During peacetime the ports of embarkation at New York and San Francisco, each of which operated a single Army-owned terminal, employed both dock and longshore labor by direct hire and utilized such labor under the direct management of the superintendent of the Army Transport

[1] Monthly summaries, Planned and Actual Sailings of Army Loaded Vessels, OCT HB Water Div Vessel Opns Analysis.

[2] Memo, Col D. C. Cordiner, retiring C of Trans Div OQMG, 29 Mar 41, p. 8; Memo, Col Cordiner for Col T. H. Dillon, C of Trans Div OQMG, 12 May 41, p. 3. Both in OCT HB OQMG Water Trans Br.

Service.[3] The policy of employing dock labor by direct hire was in effect throughout the war at most Army terminals, though a few were operated by contractors. Most longshore labor, on the other hand, was provided by contracting stevedores. The New York Port of Embarkation continued to engage longshoremen by direct hire for the Brooklyn Army base, but contracting stevedores were employed at the many other terminals which it leased and operated.[4] The San Francisco Port of Embarkation continued to employ longshore labor directly for the old Army base at Fort Mason, and followed the same practice at the new Army base at Oakland, but it engaged contracting stevedores to handle vessels loaded at leased commercial piers.[5] At the many new ports which were established by the Army during the emergency, contracting stevedores were employed. The general policy of the Chief of Transportation was to use the most responsible stevedoring contractors available but to avoid concentrating the work at any port in the hands of a single stevedore.[6]

When the United States entered the war, the Army foresaw the huge shipping task ahead and quickly recognized the desirability of keeping commercial terminals and stevedoring organizations employed, in order that the facilities might not be permitted to deteriorate or the personnel to drift into other occupations.[7] This task involved close co-operation with the Maritime Commission and later with the War Shipping Administration. The agreement which the Army and WSA concluded in June 1942 stated the general nature of their co-operation.[8] The two agencies agreed to consult each other regarding the purpose and terms of occupancy before requisitioning, renting, or purchasing piers or terminals. The Army agreed that in taking over commercial terminal facilities it would utilize the existing contracting stevedores whenever practicable, under terms consonant with those approved by WSA, and would take over also the personnel which had been operating the terminals, providing acceptable arrangements could be made.

The attraction of other industries offering higher wages and better working conditions naturally had an adverse effect on the supply of longshore labor. At certain ports the situation was aggravated by the temporary reduction of water-front activity which followed the curtailment of commercial shipping and which encouraged longshoremen to seek other employment.[9] At a large port like New York, where Army ships were loaded at numerous terminals

[3] Memo, Trans Div OQMG for Gen Sv Div (Congressional Br) OQMG, 23 May 41, sub: Loading and Discharge of Army Transports; Conf, author with Mr. Joel P. Shedd, Jr., Sp Asst, Legal Div OCT, 25 May 48. Both in OCT HB PE Gen Stevedoring.

[4] Memo within Water Div OCT (Warwick for Kells), 17 Jul 42, OCT HB PE Gen Stevedoring; Ltr, CofT to Maritime Terminal Company, New York, 23 Jul 42, OCT HB PE Gen Stevedoring; Memo, NYPE for OCT, 28 Mar 42, OCT 486.1 New York; Conf, author with Mr. D. J. McKenzie, Stevedoring and Ship Facilities Br Water Div OCT, 28 May 48, OCT HB PE Gen Stevedoring.

[5] Memo, C of Water Div OCT for CofT, 11 Nov 42, OCT HB PE Gen Stevedoring; Memo, TIG for CofT, 4 Apr 42, and atchd rpt by Col McFayden, 1 Apr 42; Memo, C of Opns Div OCT for CofT, 16 Apr 42, sub: Cargo Handling at San Francisco. Last two in OCT HB Wylie Staybacks.

[6] Memo, CofT for ASW (McCloy), 26 Aug 42, OCT 486.2 HRPE.

[7] Ltr, SW to Chm Mar Com, 22 Jan 42, OCS 17396-22.

[8] Memo Covering Interdepartmental Relationship, 13 Jun 42, OCT HB Wylie WSA.

[9] Ltr, Boston Port Authority to CG SOS, 28 Oct 42, and Reply 1 Nov 42, OCT HB Wylie Staybacks; Ltr, OCT to WSA, 17 Dec 42, regarding resumption of sailings from New Orleans to Panama, OCT 563.51-565.3 (Los Angeles 1942).

worked by different contractors, the port commander endeavored to arrange the berthing plan so as to distribute the demand for longshore gangs and provide employment for as many as possible.[10] There was considerable disparity between estimates of longshore gangs available and the extent of any shortages, but data assembled by the War Shipping Administration covering civilian longshoremen required for working dry-cargo and passenger ships indicate that during late 1944 and the first half of 1945 there were shortages on all coasts on days of peak employment.[11] The greatest peak day shortage on the Atlantic coast was 93 gangs in December 1944; on the Pacific coast, 182 gangs in May 1945.

In the fall of 1943, in view of the prospective increase in Army traffic and as insurance against vessels being delayed because of the scarcity of civilian water-front labor, the Chief of Transportation recommended that the Transportation Corps troop basis for the year 1944 include 10,000 officers and men to be trained in port activities and reserved for duty at U.S. ports. This recommendation resulted in the authorization of 60 port companies in addition to those which were to be trained for service overseas.[12] The policy was extended to the following year, and on 30 April 1945 there were 42 port companies assigned to ports on the Atlantic, Gulf, and Pacific coasts.[13] These troop units were used in loading ships only when the supply of civilian longshoremen was inadequate or when special types of cargo were involved. For the most part they were employed on other work about the ports, such as clearing the docks, unloading rail cars, and repairing gear.[14] Nevertheless, they were included as potential stevedore labor in monthly statements prepared in the Office of the Chief of Transportation comparing the prospective traffic load with the facilities and labor expected to be available to handle it.[15] In April 1945 there also were 65 Italian service units, embracing 10,847 officers and men, assigned to Army ports of embarkation. Some of them were used at the water front, but not in loading ships.

Although selective service took a considerable number of men from the water front, the War Department was reluctant to support requests for deferment except in the most urgent cases, since this type of labor was more readily replaceable than the more skilled types which were required by so many of the war industries. Furthermore, the Army needed experienced longshoremen for its port operations overseas. The Army ports of embarkation aided in replenishing the supply of workers by making their facilities available for the training of recruits.[16]

The Chief of Transportation made a close study of the efficiency of contract stevedoring, and comparative data on the handling of general cargo were compiled from the middle of 1943. The tons of cargo loaded per gang-hour varied con-

[10] Port Comdrs Conf, Boston, 30 Aug 43, p. 11, OCT HB PE Gen Port Comdrs Conf.

[11] WSA Shipping Summary, Sep 45, p. 142.

[12] Memo, ACofT for CG ASF, 30 Oct 43; Memo, Mil Pers Div ASF for CofT, 18 Nov 43. Both in OCT HB Tng Div Unit Tng.

[13] List, T/O Units Assigned to ZI Ports, as of 30 Apr 45, OCT HB Dir of Pers.

[14] Conf, author with Col G. C. Bunting, 20 Apr 50, OCT HB PE Gen Stevedoring.

[15] Monthly statements, Estimate of Present and Potential Port Capacities, OCT HB Topic Port Capacity and Utilization.

[16] Memo, C of Water Div OCT for Pers Div OCT, 22 Oct 42, OCT 231.8 Gen; Ltr, USW to Sen Kilgore, 3 Nov 43, p. 14, OCT HB Topic Kilgore Report; Conf, author with Col Alexander Corey, 28 May 48, OCT HB PE Gen Stevedoring.

TABLE 5—AVERAGE TONS OF GENERAL CARGO LOADED PER NET GANG-HOUR AT U.S. PORTS ON VESSELS LOADED FOR THE ARMY BY CONTRACTING STEVEDORES: JULY 1943–MARCH 1945 [a]

Port	July-December 1943		1944				January-March 1945	
			January-June		July-December			
	Long Tons	Measurement Tons [b]	Long Tons	Measurement Tons [b]	Long Tons	Measurement Tons [b]	Long Tons	Measurement Tons [b]
All Ports	13.9	27.3	14.7	28.0	[c] 15.1	[c] 32.2	[c] 16.0	[c] 32.8
Boston	10.8	20.5	13.3	26.7	14.9	33.4	16.3	35.4
New York	17.4	36.6	14.3	32.0	16.2	35.6	16.7	37.2
Philadelphia	16.6	28.7	17.3	29.1	18.5	35.9	17.8	36.4
Baltimore	16.4	32.4	15.8	27.8	17.2	36.9	19.1	35.4
Hampton Roads	12.7	22.1	14.0	24.6	13.3	28.6	16.0	29.6
Charleston	13.7	22.9	16.6	22.0	15.7	28.0	17.5	28.3
New Orleans	23.6	36.7	21.2	39.2	19.5	38.4	21.8	40.3
Los Angeles	11.9	24.5	12.8	27.6	12.2	29.3	12.3	28.3
San Francisco	11.5	26.5	11.2	21.6	12.1	23.6	13.0	24.6
Portland	15.4	23.5	15.8	22.1	14.3	20.3	13.2	20.2
Seattle	14.3	24.6	16.4	27.1	14.1	29.9	13.6	32.2

[a] Gang-hours are net, i.e., time actually worked. General cargo excludes explosives (ammunition and bulk explosives). Only cargo actually lifted by ship's tackle is considered.

[b] A measurement ton is 40 cu. ft., and the average for Army general cargo, while it varied considerably from time to time and port to port, was about two measurement tons to one long ton, e.g., 76 cu. ft. during first half of 1944, 85 cu. ft. during last half of 1944, and 82 cu. ft. during first quarter of 1945.

[c] Includes small amounts of general cargo loaded at Searsport, Me., and San Jacinto, Texas.

Source: Based on summaries compiled in Stevedoring and Ship Facilities Branch, Water Division, OCT, from data submitted by the respective ports, and published in ASF Monthly Progress Report, Sec. 3.

siderably as between the several Army ports and terminals, and also varied at different times at the same terminals. The variations were due to many factors, including quality of labor, local stevedoring practices, the relative density of the cargo handled, the proportion of exceptionally large or difficult-to-handle items, and the special types of stowage required for safe transit or to meet theater requirements. Consequently any efficiency data given without detailed analysis, which is not available from the records, must be viewed with reservations. This fact is to be considered in reading Table 5, which shows the average tons of general cargo (excluding explosives) loaded per gang-hour on contract at the several Army ports. Certain of the basic causes of persistent differences in the number of tons loaded may be noted. At New Orleans, which maintained a high efficiency record, the cargoes included relatively few difficult-to-handle items, and local stevedoring practices permitted the size of the gangs to

vary according to the types of cargo to be worked. On the Pacific coast the limitation of a sling load to 2,000 pounds and the smaller number of men in a standard gang were factors in keeping down the number of tons loaded per gang-hour.[17] The all-ports averages for the periods covered by Table 5 show a general improvement in cargo loading efficiency.

Data comparing the results obtained in loading general cargo with Army civilian (direct-hire) labor, contractor's civilian labor, and soldier labor are available only for the San Francisco Port of Embarkation.[18] These data, which give monthly and quarterly averages for the period October 1944 through June 1945, show that as between direct-hire and contractors' labor there was no consistent advantage on either side. As between civilian labor (17-man gangs) and soldier labor (22-man gangs), the former produced far better results. This is explainable on the ground that the troops at best had limited experience, and in some cases they were only completing their training preparatory to being assigned to oversea stations. The following tabulation shows, by quarterly averages, the number of long tons and measurement tons of general cargo loaded per net gang-hour at the San Francisco Port of Embarkation:

Period	*Army Civilians*		*Contractors*		*Soldiers*	
	LT	MT	LT	MT	LT	MT
October–December 1944	11.88	25.18	11.62	23.06	7.38	15.85
January–March 1945	11.30	25.09	13.06	24.62	8.04	18.29
April–June 1945	10.94	22.84	10.98	25.35	8.84	17.74

Explosives were loaded for the most part at piers specially constructed and equipped for that purpose. The longshoremen employed on such piers were selected from men who held U.S. Coast Guard "red cards," indicating their qualification for engaging in this hazardous work. This type of cargo was relatively uniform in density and shape, and the palletizing of the smaller sizes of artillery and aerial ammunition made them easy to handle. Consequently, in spite of the special precautions required in the interest of safety, the all-ports average for long tons of explosives loaded per net gang-hour compared favorably with the average for long tons of general cargo loaded. For example, the average during the last half of 1944 was 15.3 long tons for explosives and 15.1 long tons for general cargo. During the first quarter of 1945 the average was 16.8 long tons for explosives and 16.0 long tons for general cargo. Since, however, a long ton of explosives on the average was approximately equal to a measurement ton (40 cubic feet) and a long ton of general cargo was approximately equal to two measurement tons, the number of measurement tons of explosives loaded per gang-hour was roughly half the number of measurement tons of general cargo.[19]

[17] Conf with McKenzie cited n. 4; Ltr to Sen Kilgore cited n. 16. Standard gang on east coast was 21–22 men, on west coast 16–17 men.

[18] SFPE Quarterly Progress Reports, p. 10 of each issue, OCT HB SFPE.

[19] Based on summaries compiled by Stevedoring and Ship Facilities Br Water Div OCT from data submitted by ports of embarkation, OCT HB PE Gen Stevedoring. During last half of 1944 average measurement of a long ton of explosives was 41 cubic feet and during the first quarter of 1945 it was 39 cubic feet. The term explosives is used to cover ammunition and bulk explosives.

TABLE 6—AVERAGE COST PER TON OF LOADING ARMY CARGO BY CONTRACTING STEVEDORES AT PRINCIPAL U.S. PORTS: 1944[a]

Port	General Cargo (Measurement Ton)			Explosives[b] (Long Ton)		
	Annual Average	Low Month	High Month	Annual Average	Low Month	High Month
All Ports[c]	$1.58	$1.50	$1.73	$6.38	$5.79	$ 6.84
Boston	1.63	1.44	1.88	5.79	5.16	13.99
New York	1.67	1.46	1.93	7.36	6.60	9.64
Philadelphia	1.91	1.64	2.22	7.64	6.97	8.89
Baltimore	1.46	1.31	1.55	7.71	6.99	9.97
Hampton Roads	1.66	1.36	2.18	5.14	3.50	7.49
Charleston	1.33	1.22	1.57	4.29	4.02	12.00
New Orleans	1.07	0.94	1.17	5.75	3.47	6.55
Los Angeles	1.54	1.37	1.87	4.81	3.61	5.97
San Francisco	1.75	1.47	2.05	....	....	....
Portland	1.44	1.17	1.60	....	....	....
Seattle	1 37	1.24	1.56	4.48	3.56	5.43

[a] Costs cover only operation at end of ship's tackle, and do not include lashing, blocking, cradling, shoring, and bin construction, which were accomplished by Army direct-hire employees, or by other contractors.

[b] Includes ammunition and bulk explosives.

[c] General cargo and/or explosives were loaded at Searsport, Me., and San Jacinto, Tex., during two months; explosives were loaded at San Francisco and Portland on contract during one month. These costs are taken into account in the all-ports average, though not shown for the individual ports.

Source: Based on statistics prepared by the Stevedoring and Ship Facilities Branch, Water Division, OCT, from data submitted by the respective ports.

The cost per ton of loading Army cargo by contracting stevedores varied considerably at the several ports because of differing conditions and differing contract terms. Table 6 gives the average cost for the year 1944, and the low and high average monthly costs, at the principal ports. The general cargo loading costs are based on measurement tons and the explosives loading costs on long tons and therefore the figures are not strictly comparable. Since, however, a long ton of explosives was on a general average approximately a measurement ton, the annual average costs are roughly comparable on a measurement ton basis. A study based on long tons, which was prepared in the fall of 1944 covering a period of six months, disclosed an average loading cost of $2.95 for a long ton of general cargo and $6.17 for a long ton of explosives.[20]

The monthly average cost of loading cargo for the Army by contracting stevedores showed a gradual downward trend in the case of general cargo, but in the case of explosives this trend did not become clearly apparent until early 1945 when shipments through the North Atlantic ports,

[20] ASF MPR, Sec. 3, 31 Oct 44, p. 44.

where costs were relatively high, were greatly reduced because of the passing of the crisis in Europe. These trends can be seen in the following all-ports average costs, starting with November 1943 when the figures began to be consistently available:

Month	General Cargo Cost per MT)	Explosives (Cost per LT)
1943		
November	$1.73	$6.45
December	1.68	6.32
1944		
January	1.73	5.79
February	1.68	5.82
March	1.66	5.82
April	1.65	6.18
May	1.56	6.77
June	1.54	6.21
July	1.63	6.65
August	1.54	6.84
September	1.58	6.60
October	1.48	6.27
November	1.50	6.40
December	1.51	6.00
1945		
January	1.55	6.19
February	1.49	5.67
March	1.50	5.83
April	1.42	5.52
May	1.43	4.83
June	1.42	4.52

The higher loading cost for explosives was due principally to the fact that the base wages were much greater than those paid longshoremen handling general cargo. Other contributing factors were the higher overtime differential resulting from the great urgency of explosives shipments to the theaters, the more frequent interruptions in the explosives loading operation because of the special care required in handling and stowing such cargo and the restrictions against large accumulations at shipside, and the payment of transportation costs to men employed at explosives piers located outside the normal port areas.[21] The effect of these factors can be seen in Table 7.

The longshore unions announced a nonstrike policy early in the war, and that policy was carried out remarkably well.[22] Although there were some labor disturbances at Army terminals and a few ships were delayed in sailing because of interruptions in loading, such disturbances were rare and of short duration. In principle the longshoremen did not endorse the employment of troops at Army terminals, but the Army practice gave them little cause for complaint since soldier labor was utilized only when civilian labor was not available or when special security measures were considered necessary.[23] At certain ports union longshoremen were willing not only to work side by side with soldiers on the piers and ships but also to assist in training port companies, since the primary purpose of these troop units was to operate ports in the oversea theaters.

For a period delegates of the longshore and other maritime unions were admitted freely to Army ports of embarkation. The number of such visitors became so great, however, that in December 1943 the Chief of Transportation directed the port commanders to stop this practice.[24] The paramount reason for this ruling was military

[21] Conf with McKenzie cited n. 4. Longshoremen working general cargo at explosives piers received explosives rates of pay. See Ltr, Pres of International Longshoremen's Assn to Maj Warwick OCT, 2 Dec 42, OCT 080 ILA.

[22] Conf with Corey, cited n. 16.

[23] Memo, CofT for Deputy Chief, Legislative and Liaison Div WDSS, 25 Sep 45, OCT HB Wylie Staybacks.

[24] Memo for all port comdrs, 23 Dec 43, OCT 680.2 Admission of Union Delegates to TC Ports; Conf with McKenzie, cited n. 4.

TABLE 7—ANALYSIS OF COST OF LOADING ARMY CARGO BY CONTRACTING STEVEDORES AT U.S. PORTS: 1944 [a]

Item	General Cargo [b] (Measurement Tons)			Explosives [c] (Long Tons)		
	Cost		Percent Distribution	Cost		Percent Distribution
	Total	Per Ton		Total	Per Ton	
Total	$42,269,222	$1.581	100.0	$22,845,228	$6.380	100.0
Straight time cost	30,461,573	1.140	72.1	15,578,445	4.351	68.2
Overtime differential	6,752,029	0.253	16.0	3,931,836	1.098	17.2
Cost due to detentions [d]	3,948,312	0.147	9.3	2,477,236	0.692	10.8
Gear furnished by Army	1,107,308	0.041	2.6	....	....	....
Transportation of men [e]	....	....	....	857,711	0.239	3.8

[a] Costs include only operation at end of ship's tackle, and do not include lashing, blocking, cradling, shoring, and bin construction, which were done by Army employees, or by other contractors.

[b] Costs are computed on 3,606 ships loaded with 26,731,377 Measurement Tons of cargo.

[c] Costs are computed on 1,207 ships loaded with 3,580,685 Long Tons of cargo.

[d] Consists mainly of extra labor necessitated by failure of equipment or other circumstances causing temporary stoppage of work.

[e] Includes travel time and carfare allowed to men working on explosives piers which for safety reasons were located outside normal port areas.

Source: Based on summaries compiled in Stevedoring and Ship Facilities Branch, Water Division, OCT, from data submitted by ports of embarkation.

security, but it had been found also that the presence of numerous union delegates distracted the workmen and interfered with the performance of their duties. It was recognized, however, that union representatives could be of aid in maintaining good employee relations, and provision was made for them to conduct their necessary business in the office of the port industrial relations officer. Port commanders were given authority, moreover, to admit union delegates to the piers and the ships in exceptional cases when this was necessary to the performance of their mission.[25] Comments from the commanding general of the San Francisco Port of Embarkation regarding the difficulties involved in enforcing the plan at his port called forth a firm reply from the Chief of Transportation, in which he stated that the Under Secretary of War had sustained his policy in this matter after the receipt of complaints from officials of certain unions, and he directed that immediate steps be taken to place the policy in effect at San Francisco, as already had been done at all other Army ports.[26]

[25] Memo, CofT for all port comdrs, 21 Jan 44, OCT 680.2 Admission of Union Delegates to TC ports.

[26] Memo, CG SFPE for CofT, 15 Apr 44; Memo, CofT for CG SFPE, 22 May 44. Both in OCT 323.3 San Francisco. See also remarks of Maj Charles Rothouse at Port and Zone Comdrs Conf, morning session, 8 Jul 44, p. 35, OCT HB PE Gen Port Comdrs Conf.

While pier operation and stevedoring were the direct responsibility of the port commanders, the Chief of Transportation maintained a close supervision over these activities. Soon after the establishment of an independent transportation service in March 1942, Mr. Andrew D. Warwick (later Colonel), a man of extensive experience in commercial stevedoring, was engaged to head the Army Transport Service Branch of the Water Division, later designated the Stevedoring and Ship Facilities Branch.[27] Among his assistants in the branch were two merchant marine masters, Mr. Daniel J. McKenzie, who had served on Army transports, and Mr. Edgar C. Seward. This Branch completely rewrote the Army technical manual dealing with pier operation and stevedoring. The manual was issued as a guide for use by Army port organizations in the zone of interior and in the theaters and later was adopted by the U.S. Navy and the U.S. Coast Guard.[28] It developed improvements in stevedoring equipment and new techniques for handling, lashing, blocking, and stowing, which were promulgated to the ports.[29] It devised reports on cargo operations to be submitted monthly by the ports of embarkation as a basis for the analyses of stevedoring efficiency and costs referred to above. The branch promoted and secured the adoption of the fixed-price commodity basis for stevedoring contracts at Army ports.[30]

In the early part of the war various types of stevedoring contracts were used by the several ports. The Water Division, however, favored a fixed-price commodity basis as providing the greatest incentive to efficiency and the best means of reducing cargo loading costs, and eventually it was arranged for this type of contract to be used at all ports.[31] Because of differing conditions at the ports it was not found practicable to require that the contracts be uniform in all respects, but standard clauses were worked out gradually, and in May 1945 the Chief of Transportation informed the ports that thereafter deviations from the recommended clauses would be permitted only when the ports could justify the exceptions. When the flow of supplies back from the theaters became substantial, fixed-price commodity rates were adopted also for discharging cargo at U.S. ports.

Commodity rates were arrived at by negotiation, and bids might or might not be called for. When it was found that there were not sufficient data for fixing commodity rates, a short-term contract on a man-hour basis was authorized as a means of developing the needed cost information. After 90 days' experience under a contract, and at 90-day intervals thereafter, either party had the right to request a revision of rates and submit an analysis of costs to support its request.[32] In case of general wage

27 Memo, CofT for TAG, 26 Sep 45, sub: Recommendation for Award of Legion of Merit, OCT 201 Warwick.

28 WD TM 55-310, 20 May 44, sub: Stevedoring.

29 See occasional issues of Monthly Vessel Utilization Summary, OCT HB Water Div Vessel Utilization Rpts; also Suggestions for Securing of Cargo, 24 Apr 45, and TC Pamphlet 42, Cargo Checking, 26 Jun 45, OCT HB PE Gen Stevedoring.

30 Memo, C of Water Div OCT for Exec Off OCT, 1 Oct 45, sub: Rpt of Accomplishments and Handicaps, OCT HB Water Div Rpts.

31 Conf with Shedd, cited n. 3; Memo within Water Transport Br OQMG (Long for Kells), 2 Mar 42; Memo, CofT for NOPE, 12 May 42; Memo, Warwick for Kells, 14 Aug 42; OCT Misc Ltr 137, Supp. 1, 3 May 45. All in OCT HB PE Gen Stevedoring.

32 Conf with McKenzie cited n. 4; Memo, C of Water Div OCT for CG NYPE, 29 Oct 43, sub: Reduction in Stevedoring Rates at Bush Terminal Piers; 1st Ind NYPE for CofT, 1 Dec 43. Last two in OCT 486.2 New York.

adjustments the 90-day limitation was not applicable. The government had access to the contractor's records and accounts at all times for the purpose of determining whether his profits were excessive. In April 1945 the Chief of Transportation, taking into account the volume of cargo then moving, informed his contracting officers that 5 to 8 percent profit, based on direct labor cost after all allowances had been made for contractor's expense items, such as insurance, social security taxes, overhead, supervision, and gear, was considered fair.[33] When profits were found to be excessive after three months' experience, the contracting officers were expected to take immediate steps toward readjustment of the commodity rates. Since there was considerable variation in the density of many commodities, contracts included both weight and measurement rates and contractors had the privilege of billing on whichever basis would produce the greater tonnage.[34]

In order to prevent excessive insurance costs from entering into contracts, the Army agreed to indemnify contracting stevedores in case of claims exceeding $250,000. This arrangement grew out of the contractors' desire for adequate protection in case an explosion on a ship or a pier should kill or injure many workmen. The Army paid no claims under the arrangement, since disastrous explosions were avoided despite the large quantities of ammunition and bulk explosives handled.[35]

Toward the close of the war the Navy adopted the fixed-price commodity basis and thenceforward closer co-ordination between Army and Navy contracting for stevedoring work was possible.[36] The War Shipping Administration stevedoring contracts were on a cost-plus-fixed-fee basis.

Materials-handling equipment was supplied by the Army to contracting stevedores on a rental basis under certain circumstances. This was generally true of heavy lift equipment (over 5-ton capacity) which contractors ordinarily did not possess. It was true also of certain smaller types of gear, such as fork lift trucks and crawler cranes, which were extensively used but which contractors could not readily procure because of priorities. All such gear was scarce and the Army's requirements for domestic and oversea ports were great. In order to assure maximum utilization, the Chief of Transportation directed that a pool of materials-handling equipment be established at each port of embarkation and that a qualified officer be placed in charge, to be responsible for its proper distribution, economical use, and correct maintenance.[37] At ports where the facilities were widely scattered, subpools were established in like manner.

Efficient Utilization of Vessels

The Chief of Transportation, confronted from the beginning with a shortage of bottoms and the prospect that this condition would continue throughout the war, was under pressure at all times to make the best possible use of the shipping placed

[33] TC Cir 120-9, 24 Apr 45, sub: Stevedoring Contracts.

[34] Memo, Stevedoring and Ship Facilities Br Water Div for Fiscal Div OCT, 19 Jan 43, OCT HB PE Gen Stevedoring.

[35] Conf with Shedd, cited n. 3.

[36] In May 1946 the Army and the Navy adopted a uniform type of contract based on the Army form, and a joint form of stevedoring performance record. See Army-Navy Conf, 27–28 May 46, with approved contract form, OCT HB PE Gen Stevedoring.

[37] TC Cir 120-4, 16 Feb 44.

at his disposal. His effort to do so was beset with difficulties arising from the abnormalities of wartime and the fact that some of the circumstances which encouraged waste were not under his control. The problem of obtaining optimal utilization was twofold, involving the fullest possible loading of the vessels and the fastest possible completion of round voyages between home and oversea ports.

This problem was considerably simpler with troopships than with cargo vessels. Because of the unrelenting demand for more troop lift, the capacities of the troopships were increased to what was considered maximum by the installation of additional bunks, with due regard for safety and sanitation. Troopship schedules were prepared initially in accordance with basic strategic decisions, and insofar as possible subsequent changes in troop movement plans were ascertained in advance from the Operations Division of the General Staff so that sailing schedules could be adjusted accordingly.[38] When the troop requirements of a particular theater were light, or when there were sudden changes in troop movement plans, ships might sail with empty spaces. When the troop requirements of a theater were heavy, the vessels sailing to that theater were loaded to practical capacity. This often was well beyond the berthing capacity and necessitated troops sleeping in the corridors, or on the decks if the weather permitted, or in berths which were used by other soldiers during other parts of the day or night.[39]

Troopship turnaround figures were not influenced by some of the circumstances which affected cargo vessels, but they were subject to many varying conditions such as the speed and frequency of convoys, the speed and routing of vessels which sailed independently, delays pending the readiness of oversea ports to effect discharge, and delays incident to conversion and repair work performed in home ports. Conversion and repair work was an important factor, particularly on the Pacific coast where the repair facilities were limited and the Navy's requirements were heavy. A study of 175 troopships which sailed from the Pacific coast during six months in late 1944 and early 1945 showed that 99 of them underwent repairs or alterations while in home ports and that the average time consumed by such work was 21.47 days.[40]

The data regarding the length of troopship round voyages (turnaround cycles) during the war are meager and hence of limited value. They are averages computed on a theater or area basis, although the distance from the United States to the various ports in certain theaters differed greatly. The average turnaround cycles shown below include the days spent in U.S. and oversea ports and the days spent on outward and homeward voyages; they cover a representative number of Army-controlled troopship voyages to the respective areas ending during the specified periods, but probably not all voyages in any case:[41]

[38] See Memo, CofT for CG ASF, 10 Apr 43, OCT HB Wylie Shipping Requirements and Allocations 1943.

[39] Ltr, Col D. E. Farr to author, 14 Feb 50, Item 7, OCT HB Mvmts Div Gen.

[40] Memo, C of Mvmts Div OCT for Gen Wylie, 16 Mar 45, sub: Utilization of Troopships, OCT HB Water Div Ship Repair and Conv.

[41] ASF MPR, Sec. 3, Jul 43, p. 84; Oct 43, p. 18; Jul 44, p. 14. Low UK figure for 1943 probably due to inclusion of fast British ships; high UK figure for 1944 due to long average stay in U.S. ports, probably because of conversion or repair work.

Destination Area	Jan–Oct 1943 No. of Ships	Jan–Oct 1943 Avg. Days	Jan–Jun 1944 No. of Ships	Jan–Jun 1944 Avg. Days
U.S. East Coast to—				
United Kingdom	13	33.7	24	55.6
North Africa (Mediterranean)	16	52.3	25	55.7
North Africa (Atlantic)	12	39.0	18	41.1
U.S. West Coast to—				
Hawaii	14	30.2	11	37.4
South Pacific	26	77.0	16	70.3
Southwest Pacific	20	68.2	10	61.9

After the end of the fighting in Europe and the discontinuance of convoys in the Atlantic, the turnaround cycles for troopships plying between U.S. Atlantic coast ports and Europe naturally were shorter. During the period June–December 1945, the round voyages to Northwest Europe averaged 29.2 days, and those to the Western Mediterranean averaged 35.6 days.[42]

The problem of utilizing the greatest possible percentage of dry cargo ship capacity was a complex one. The criterion was to load such vessels "full and down," that is, to fill the space and at the same time lift as much weight as the respective ships were designed to carry. This criterion was difficult to achieve even in peacetime commercial loading, and under wartime conditions the Transportation Corps could only endeavor to approach it as nearly as practicable. When critics alluded to the unused cargo space (bale cubic) or deadweight capacity on Army-loaded vessels, the Chief of Transportation pointed out that there were circumstances which made that result unavoidable.[43]

Although there were a number of conditions which militated against the complete utilization of cargo ship capacity, the basic difficulty was the lack of balance in Army matériel—the preponderance of bulky and light items over dense and heavy items—which made it impossible to use the entire deadweight capacity even if the cargo space were entirely filled. In order to load a Liberty ship full and down the cargo should have an over-all ratio of about one long ton to 1.25 measurement tons; in other words, it should average about 50 cubic feet to the long ton.[44] An analysis of Army cargoes shipped to the United Kingdom during the 16-month period, January 1942 through April 1943, disclosed the following facts regarding the principal types of matériel:[45]

[42] Based on data published in monthly issues ASF MPR, Sec. 3.

[43] Memo, CofT for CG SOS, 10 Jun 42, sub: Contl of Ship Opns, and Incl, OCT HB Wylie WSA Controversy; Memo, CofT for Mr. Julius Amberg, Sp Asst to SW, 13 Apr 43, sub: Efficient Use of Shipping, OCT HB PE Gen Stevedoring.

[44] WD TM 55–310, Stevedoring, 20 May 44, p. 100.

[45] ASF MPR, Sec. 3, May 1943, p. 89.

Type of Matériel	*Cubic Feet per Long Ton*	*Ratio of MT to LT*
Air Corps	266	6.65
Vehicles	172	4.31
Medical	134	3.36
Quartermaster (less food)	116	2.89
Ordnance (less ammunition)	108	2.70
Engineer	94	2.35
Signal	90	2.25
Post Exchange	88	2.21
Chemical Warfare	81	2.03
Gas and Oil (packaged)	62	1.56
Quartermaster Food	56	1.39
Ammunition	42	1.05

The high ratio of measurement to weight in so many of the principal items of Army cargo was partially offset in the actual loading of ships by a variety of methods which will be outlined later. The results naturally differed from time to time and from port to port. The average ratios attained during the three full war years at ports on the Atlantic, Gulf, and Pacific coasts are shown below:[46]

Coast	*1942*	*1943*	*1944*
All Coasts	1.8	1.9	2.1
Atlantic	1.7	1.9	2.1
Gulf	1.9	1.6	1.8
Pacific	1.9	2.0	2.1

In addition to the lack of balance between heavy and light cargo, Army matériel included many items which created an abnormal amount of lost space, or broken stowage. The lost space around and above unboxed trucks, tanks, and artillery, for example, was much greater than in the case of boxed, bagged, or packaged commodities. A well-balanced general cargo stows to within 10–15 percent of the total bale cubic capacity (below deck). On the other hand, a study of vessels loaded by the Army during the first nine months of 1943 showed 19.32 percent lost space on 201 vessels loaded at Boston, 15.63 percent lost space on 753 vessels loaded at New York, 16.22 percent lost space on 190 vessels loaded at Hampton Roads, and 16.27 percent lost space on 302 vessels loaded at Seattle.[47]

Numerous measures were taken to offset the handicaps imposed by the character of Army matériel and so improve the utilization of cargo ship capacity. Exchange arrangements were worked out with the War Shipping Administration and the British Ministry of War Transport, so that when practicable vessels sailing under the control of those organizations loaded some of the bulky Army cargo and Army ships loaded some of the heavier lend-lease items.[48] Army

[46] Data prepared for transportation section of statistical history of the Army, based on monthly rpts from PE's to OCT, Outbound and Inbound Cargo, SPTOW 22.

[47] Conf, author with D. J. McKenzie, 1 May 50, and attached statistics, OCT HB PE Gen Stevedoring; WD TM 55-310, 20 May 44, p. 100. Lost space, or broken stowage, is space which cannot be used because of the character of the cargo which is being shipped and the structure of the ship's cargo spaces.

[48] Discussed in Ch. VI. See also Ltr, CofT to Australian Legation, 14 Apr 42, and Memo, CofT for International Div SOS, 6 Mar 43, OCT HB Gross Day File.

TIGHT STOWAGE OF PACKAGED FREIGHT *in and around vehicles was employed to reduce loss of cargo space in shipping assembled trucks.*

and lend-lease packaged or bagged commodities were accumulated at the ports to be stowed in and around trucks, tanks, and artillery when that equipment was loaded below deck.[49] Deck spaces were utilized to the fullest and deep tanks were filled with cargo whenever practicable. As experience accumulated, better methods of stowing the more difficult items were developed by which space was economized without sacrificing safety. The more compact packing of vehicles and the reduction in the percentage of assembled vehicles shipped to the theaters effected a considerable saving of space.[50] The conversion of ships for the special purpose of carrying tanks and assembled aircraft and the shipment of aircraft and vehicles on false decks constructed on tankers relieved the cargo fleet of the necessity of carrying so many of these space-consuming machines. Careful cargo planning, practiced at all ports, involved not only getting the best possible balance from matériel which was on the pier when loading began but also anticipating this factor when calling cargo to the ports.

The extent to which the full weight and cubic capacities of cargo ships were utilized was adversely affected by a number of circumstances for which there was no remedy. Urgent theater requirements sometimes dictated the items which were to move in certain ships or certain convoys, thus limiting the opportunity for the inclusion of items of lower priority to give balance to the cargoes.[51] When ships arrived late on berth and had to be loaded hastily to avoid missing a convoy, they could not be stowed as carefully as otherwise would have been the case. Special types of stowage, devised to meet peculiar theater requirements pertaining to the discharge or ultimate destination of the matériel, were found to produce less efficient stowage in most cases.[52] Occasionally high priority cargo for which space had been reserved failed to arrive at the port before sailing time, with the result that some or all of the space could not be used.[53] In view of the fact that most War Shipping Administration freighters allocated to the Army for outward voyages returned from overseas with only small quantities of cargo, and since the obtaining of ballast to insure their stability was difficult at certain oversea ports, or involved long delays, WSA had ballast placed in some vessels at their home ports, thus reducing space available to the Army.[54]

The over-all effect of the many factors which influenced the loading of cargo ships

[49] Memo, ACofT for Gen Deane, 6 Jan 43, OCT HB Wylie Staybacks; Min of Port Loading Com SFPE, 8 Jan 45, par. 6(b), OCT HB PE Gen Overseas Supply.

[50] Study, Statistics and Progress Br, Contl Div, OCT, Army Cargo Loading, Aug 44, p. 20, OCT HB PE Gen Stevedoring; Memo, CofT for CG ASF, 4 Dec 43, sub: Shipment of Boxed Vehicles, OCT HB Wylie Shipping and Cargo for UK (1943–44).

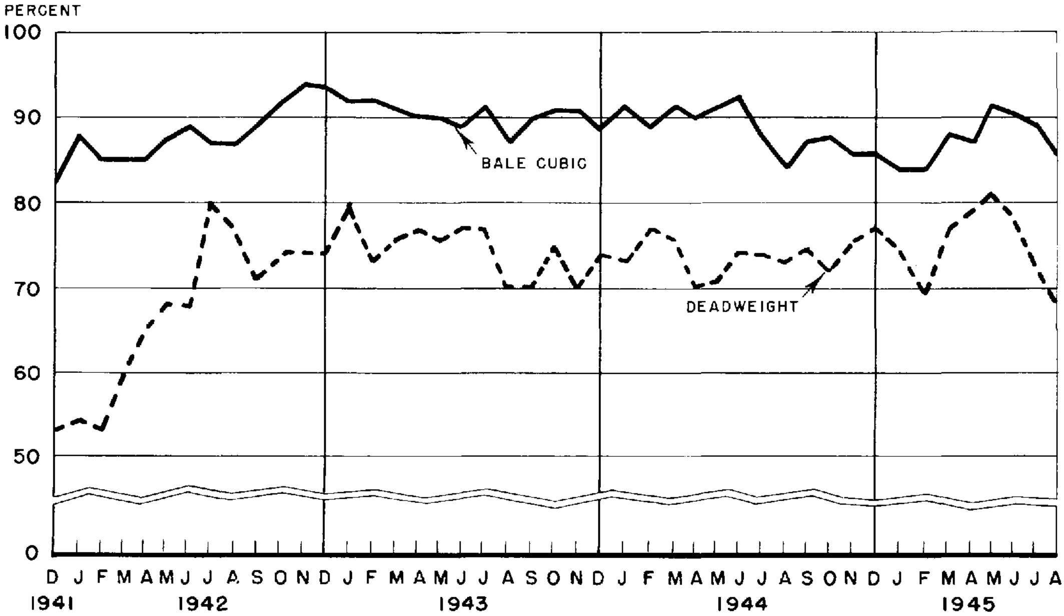
[51] Study of early cargo convoys to North Africa showed that only 66.1 percent of below-deck cargo space of UGS–1 was used, because of the large percentage of vehicles and other organizational equipment and because some vessels were combat loaded; on UGS–2 the percentage was 78.8, on UGS–3 it was 78.1, and on UGS–4 it was 77.7. ASF MPR, Sec. 3, May 43, pp. 82, 83.

[52] ASF MPR, Sec. 3, Aug 44, p. 55. Study covered 10 "prestowed" and 49 "commodity loaded" vessels dispatched from NYPE to ETO. Special types of stowage will be discussed in another volume of TC history.

[53] Memo, Dir NTS USN for CofT, 28 Sep 42, sub: Voyage Rpt of USS *West Point;* Memo, CofT for CG SOS, pars. 2, 3, 5, 3 Jan 43, sub: Loading of UGF–3. Both in OCT HB Meyer Staybacks.

[54] Memo, C of Water Div OCT for ACofT (Wylie), 27 May 43; Rad WSA to WSA Representative Algiers, 28 May 43 (WD CM–OUT 12478, 29 May 43). Both in OCT 563.51–565.1 Africa 1943.

CHART 5—UTILIZATION OF DEADWEIGHT AND BALE CUBIC CAPACITIES OF SHIPS LOADED BY THE ARMY AT U.S. PORTS: DECEMBER 1941–AUGUST 1945*

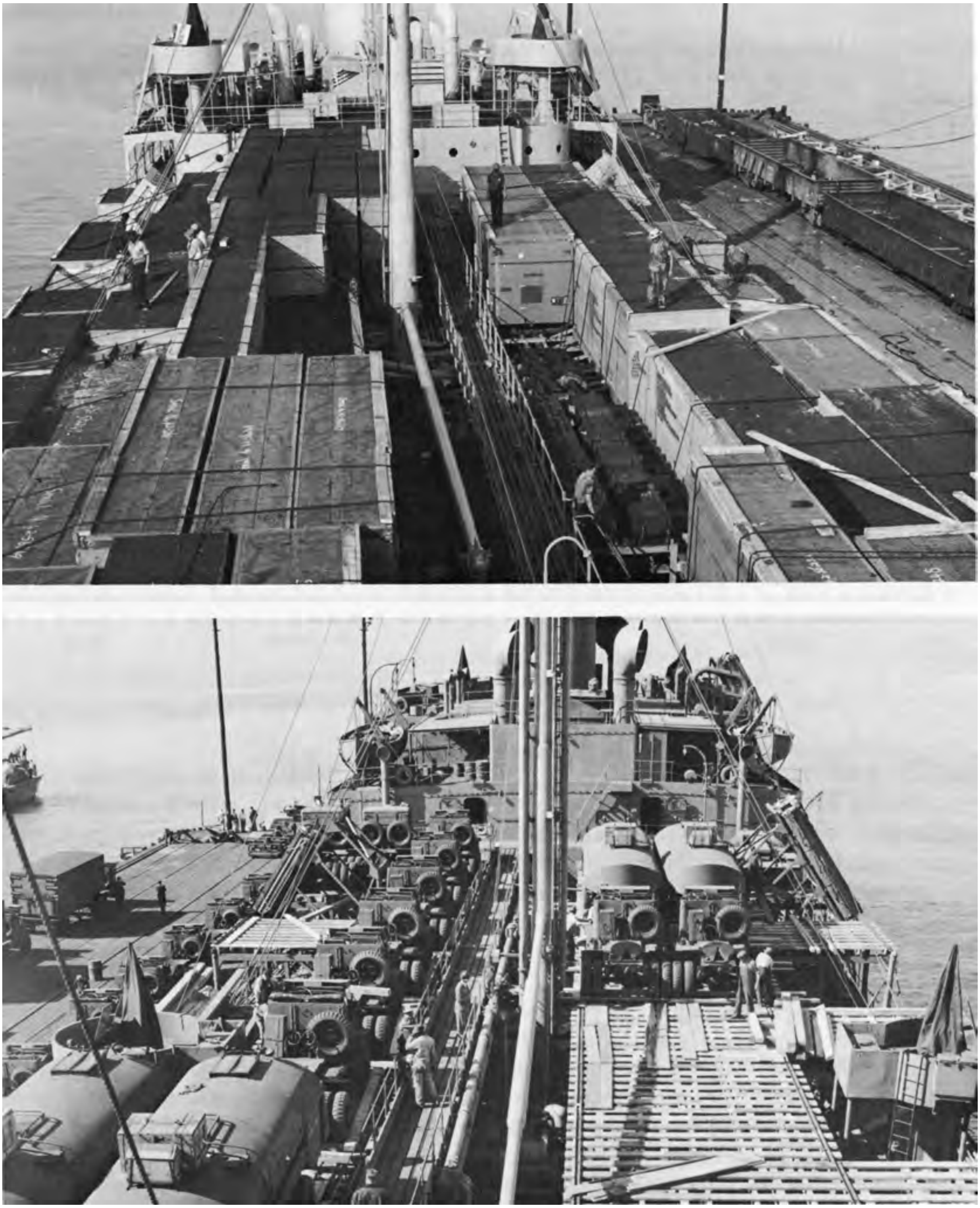


*Only dry-cargo ships on which the Army loaded the entire cargo are included.
Source: Final Rpt of CofT, ASF, WW II, 30 Nov. 45, p. 54.

at U.S. ports by the Transportation Corps is reflected in Chart 5, which shows the percentage of the deadweight and bale cubic capacities actually utilized on vessels sailing each month throughout the war. After the poor results of the first six or seven months—results attributable chiefly to the great number of unboxed vehicles shipped, the lack of bottom (especially heavy and dense) cargo, and the difficulty of cargo planning due to the uncertain availability of many types of Army matériel —the deadweight curve attained a general level of about 74 percent.[55] The rather sharp fluctuations in the deadweight curve were due principally to developments in the strategic situation, which resulted in changes in the types of cargo required overseas. For example, toward the end of 1944 when shipments of relatively heavy ammunition to Europe became extraordinarily large the deadweight curve turned upward; during the first two months of 1945, when the movement of ammunition was drastically cut, it turned downward; during succeeding months, with German resistance crumbling, shipments of vehicles and other bulky equipment were curtailed and a larger percentage of the cargoes was made up of relatively heavy subsistence stores, and the deadweight curve again turned upward.[56] The bale cubic curve, after a tem-

[55] For analysis of loading Jan–May 42, vessel by vessel, with port averages, see Ships Loaded by Army Transport Service, OCT HB PE Gen Stevedoring.

[56] Gross final rpt, p. 50.



CRATED AND UNCRATED EQUIPMENT STOWED ON DECK. *All available deck areas were utilized in order to achieve the maximum cargo lift.*

porary rise to 94 percent at the end of 1942, leveled off to an average of about 90 percent, where it remained until the last half of 1944; it then dropped somewhat, chiefly because of special types of loading employed in connection with the campaign in Europe, which involved an unusual amount of lost space. It is to be noted, however, that the bale cubic curve represents a comparison of hold cubic capacity with the cubic measurement of cargo carried in the hold and on deck. Since deck cargo averaged about 10 percent of hold cubic capacity, hold cargo represented about 80 percent.[57]

There was considerable variation in the percentage of utilization of deadweight and bale cubic capacities at the several ports, because of variations in the factors affecting loading. For the war period as a whole the Atlantic coast ports and Pacific coast ports had the same percentage of deadweight capacity utilization (74 percent), but the Pacific coast ports had an average of 95 percent of bale cubic utilization whereas the east coast ports had only 85 percent.[58] The west coast loadings were not subject to pressure because of convoy sailing dates, as was the case on the east coast. The west coast ports were able to put more cargo on deck because of the generally better weather conditions in the South Pacific, and the fact that many of the vessels moving from Seattle and Prince Rupert to Alaska used the inside passage. The east coast ports included deep tank spaces in computing the bale cubic capacity of the ships which they loaded, but the west coast ports did not, since deep tanks were required more frequently for fresh water on the long voyages in the Pacific. The east coast ports handled a greater number of specially stowed ships, involving unusual amounts of lost space.

Studies of the turnaround of cargo ships in Army service during various periods were made in the Office of the Chief of Transportation, in order to determine whether and how the turnaround cycles could be shortened. The cycles for the several routes differed considerably from time to time, depending on convoy arrangements, the extent of diversions, and port conditions. The subjoined tabulation gives the results of one of the studies insofar as it related to the principal routes. Although the data cannot be considered complete nor typical of the war period, they illustrate the importance of days spent in port in relation to the turnaround cycle as a whole. The exceptionally long periods spent in the Mediterranean, South Pacific, and Southwest Pacific Areas were due to port congestion and other circumstances which will be discussed in some detail in the next section of this chapter. The greater number of days spent in U.S. ports by ships sailing to the United Kingdom may be attributed to the fact that the period covered by this study was just prior to the invasion of Normandy when the activity in U.S. Atlantic ports was increasingly heavy. The following data include dry-cargo vessels which sailed in Army service and completed round voyages at U.S. ports during the period January–June 1944:[59]

[57] See Study, Army Cargo Loading, cited n. 50, pp. 9, 10.

[58] Data prepared for transportation section of the statistical history of the Army, based on monthly rpts from PE's to OCT, Cargo Analysis Rpt.

[59] ASF MPR, Sec. 3, Aug 44, p. 11. Most vessels were in Army service on the outward voyage only. Days in U.S. ports include days under WSA control before vessels were delivered to Army for loading.

Destination Area	No. of Ships	Total Days Avg.	Days in U.S. Ports	Days Out-bound	Days in Oversea Ports	Days In-bound
U.S. East Coast to–						
United Kingdom	440	76.9	27.4	16.5	15.4	17.6
Mediterranean	48	116.0	20.5	23.1	48.5	23.9
U.S. West Coast to–						
Hawaii	67	46.2	18.7	9.5	9.2	8.8
South Pacific	35	98.2	19.5	20.0	38.7	20.0
Southwest Pacific	35	129.9	19.0	26.6	58.1	26.2

The turnaround data shown below, which were compiled by the War Shipping Administration and include cargo vessels in both Army and non-Army services, illustrate several noteworthy points. Comparison of the length of round voyages to the Persian Gulf and the Red Sea via South Africa and via the Mediterranean discloses the great saving of time achieved for vessels proceeding to the Middle East when the Mediterranean route was opened to Allied traffic in the summer of 1943. Comparison of the days spent in Persian Gulf ports during the earlier part of the period (i.e., when vessels were routed via South Africa) and the latter part (i.e., when vessels proceeded via the Mediterranean) shows the great improvement in the dispatch of ships effected by the U.S. Army after it took over the operation of Persian Gulf ports in 1943. In considering the fact that the vessels in most instances spent more days in "U. S. waters" than in oversea ports, it is to be borne in mind that ships often called at more than one U.S. port, that repairs were performed almost entirely at home ports, and that a large proportion of the cargo ships which loaded at North Atlantic ports had to wait for convoy sailings. The following tabulation covers a representative number of War Shipping Administration vessels, sailing under Army, Navy, and WSA auspices, which completed round voyages at U. S. east coast ports during the period January 1943–March 1944:[60]

[60] ASF MPR, Sec. 3, May 44, p. 14.

Destination Area	No. of Ships	Total Days Avg.	Days in U.S. Waters	Days Out-bound	Days in Oversea Area	Days In-bound
United Kingdom	1,412	69.4	22.0	14.5	18.4	14.5
Western Mediterranean	939	90.5	25.7	19.8	24.9	20.1
Persian Gulf via South Africa	119	241.7	38.3	72.7	36.3	94.4
Persian Gulf via Mediterranean	142	157.2	28.0	41.5	17.8	69.9
Red Sea via South Africa	84	207.8	34.9	68.9	17.9	86.1
Red Sea via Mediterranean	90	125.7	29.6	33.2	20.6	42.3
South and East Africa	45	149.6	32.1	44.1	27.6	45.8
India	165	180.3	30.8	60.4	19.7	69.4
North Russia	54	150.1	33.7	44.9	32.9	38.6

Cargo vessels which the War Shipping Administration allocated to the Army for the outward voyage were under WSA control while they were being discharged and serviced at U.S. ports, prior to delivery to the Army for loading. The Chief of Transportation made an intensive study of the operation of such vessels after they had been taken over by his ports of embarkation, and worked with the port commanders in an effort to reduce the number of "Army days." The data for such studies were submitted by the ports daily, and the analyses were prepared by the Water Division and the Control Division.[61]

In the spring of 1944, when every effort was being made to get quick dispatch for the vessels destined to Europe because of the impending invasion of Normandy, General Wylie, the Assistant Chief of Transportation for Operations, reported to General Gross that the Army record at the ports serving the European theater was "not good," but was improving. He found that the number of days on berth for vessels loaded by the Army compared favorably with that for vessels loaded by agents of the War Shipping Administration. Although the average Army days had been reduced from 13.5 in January 1944 to 10.5 for February, and again to 9.5 for March, he doubted that the average over a long period would be better than 10 or 11 days, because of the number of specially stowed vessels required by the theater and the inadequacy of stevedore labor for the heavy job to be done. Labor was a critical item, Wylie indicated, and he stated that a special effort was being made to improve that situation.[62] General Franklin, Assistant Chief of Transportation for Water, reported that there were not sufficient longshoremen at New York for continuous day and night operations, that the longshoremen were contending that the amount of overtime worked already had reduced their efficiency, and that the adoption of an over-all manpower utilization policy by all ship operators was urgently needed to assure maximum results from the labor available.[63]

An analysis of "Army days" in home ports, for more than 4,000 cargo vessels which sailed during 1944, as given in Table 8, affords an opportunity for comparison of the records of the several Army ports. The figures, for the ports of embarkation at Boston, New York, and Hampton Roads, which include sailings from the cargo ports at Searsport, Philadelphia, and Baltimore, respectively, show that an average of more than thirty-two hours per ship was lost awaiting convoy departures; the averages were low for other ports because they dispatched few ships in convoy. At San Francisco and Seattle (the data for the latter port embracing also the subports of Portland and Prince Rupert), the amount of time lost on account of repairs was large because of the numerous merchant and naval vessels requiring repairs after long voyages in the Pacific and the inadequacy of repair facilities and labor at those ports.[64] Time lost on account of repairs was exceptionally high at Seattle, because most of the vessels in the Alaska service were old and subjected

[61] OCT Cir 59, 1 May 43, sub: Daily Teletype Rpt.

[62] Memo, Wylie for Gross, 5 May 44, OCT HB Wylie Staybacks.

[63] Memo, Franklin for Gross, 28 April 44, OCT HB Wylie Port Capacity Studies.

[64] SFPE Quarterly Progress Reports, Jan–Mar 45, p. 15, and Apr–Jun 45, p. 14, OCT HB SFPE, show that on an average about 2 of 3 ships in port under Army control were undergoing repair.

TABLE 8—TIME SPENT AT U.S. LOADING PORTS BY DRY CARGO VESSELS LOADED AT ARMY PORTS OF EMBARKATION AND SAILED DURING THE PERIOD FEBRUARY–DECEMBER 1944 [a]

Time in Port	All Ports	Boston	New York	Hampton Roads	Charleston	New Orleans	Los Angeles	San Francisco	Seattle
Number of Vessels	4,031	402	1,470	868	116	177	233	463	302
Average Days in Port, Total [b]	17.4	17.0	18.7	14.1	9.8	15.7	16.2	22.3	18.3
Army Days Only	10.5	11.1	10.7	9.6	7.0	8.7	8.7	12.2	13.3
Days Available for Loading	7.5	9.4	8.2	5.4	6.0	7.7	6.8	8.7	5.8
Average Hours Lost, Total	74.4	39.9	58.5	100.2	25.0	23.1	44.5	83.6	180.0
Waiting Convoy	22.1	30.2	31.3	34.6	1.9	0.1	0.0	1.1	0.0
Repairs	8.4	2.0	0.6	2.2	1.8	9.8	4.7	21.1	57.5
Waiting Labor	5.2	....	1.4	5.3	1.5	....	7.5	2.3	37.7
Waiting Cargo	5.0	0.5	2.0	9.2	5.6	....	0.3	3.2	22.4
Bad Weather	3.4	1.3	2.6	7.9	5.4	3.5	2.1	0.1	1.8
Discharging	3.2	3.2	0.4	0.2	4.8	5.0	3.5	2.1	25.5
Waiting Berth	1.7	0.7	1.7	3.9	0.1	0.5	0.1	0.7	0.5
Shifting Berth	1.5	1.6	0.8	0.7	0.6	2.6	0.4	3.1	5.4
Other Delays	23.9	0.4	17.7	36.2	3.3	1.6	25.9	49.9	29.2

[a] Subports and cargo ports are combined with the ports of embarkation to which they were subordinate.

[b] Difference between total days and Army days represents time vessels allocated to Army by War Shipping Administration spent in port under WSA control before being delivered to Army.

Source: ASF Monthly Progress Report, February 1945, Sec. 3, Transportation, p. 56. (Based on data compiled by the Vessel Operations Analysis Branch, Water Division, OCT.)

to unusually hard usage in northern waters.[65] The Seattle column also indicates exceptional loss of time for other reasons. The loss awaiting labor was due to the scarcity of longshoremen and the preference given to the loading of vessels under Soviet control.[66] The loss awaiting cargo resulted from the limited facilities of most of the Seattle ship terminals, which prevented the assembling of sufficient cargo in advance of the vessels going on berth, and the congestion of the water front, which delayed truck deliveries from storage. The loss of loading time while the vessels were discharging also was due to the inadequate work space on the piers and bulkheads, which made it difficult to carry on discharging and loading operations at the same time.

Control of Ship Utilization in the Theaters

While the enforcement of economy in the utilization of shipping at home ports suffered many handicaps, it was an even more difficult problem with respect to the oversea theaters. This was due in part to adverse conditions which prevailed in the theaters and in part to the fact that each oversea commander was concerned primarily with his own supply and transport

[65] Conf, author with Col Thomas J. Weed, 21 Jun 48, OCT HB Water Div Vessel Days in Port. Col Weed was Supt ATS at Seattle in 1942. Remainder of this paragraph is based on Col Weed's remarks.

[66] See also Ltr, Brig Gen Wylie to Brig Gen John F. York, Jr., The President's Soviet Protocol Com, 5 Jul 44, AG 563.5 West Coast.

requirements, rather than with the over-all shipping situation, and the Army Chief of Transportation had no direct control of vessels after they arrived at oversea ports. Ships held in the theaters fell into three broad categories: (1) those detained beyond the normal period because of inability to discharge them promptly or uncertainty as to when or where they should be discharged, (2) those retained temporarily for service within the theaters, and (3) those assigned more or less permanently to the theater commanders. The Chief of Transportation used the means at his disposal to reduce waste in theater shipping operations, but eventually action by the Joint Chiefs of Staff was necessary.

The problem of ship detention in oversea ports because of discharge difficulties was encountered first in the Southwest and South Pacific during the 1942 effort to strengthen the Allied position in those areas and to begin an offensive against the Japanese. Even at the well-developed ports of Melbourne and Sydney the discharge of U.S. Army cargo was slow, because of the shortage of labor and equipment and the restrictive influence of the Australian labor unions.[67] The situation was made more difficult at the lesser Australian ports, such as Brisbane and Townsville, by their limited docking facilities. The small port of Noumea in New Caledonia was wholly inadequate to handle the heavy traffic which the Army and the Navy concentrated there in connection with the defense of the New Hebrides and the offensive in the Solomons, and a heavy backlog of undischarged vessels soon developed. A similar experience was encountered at Espiritu Santo when the use of that port was begun as a means of relieving Noumea. The problem was accentuated at Noumea and Espiritu Santo by lack of co-ordination between the Army and the Navy until joint port operation was established.[68] The Army Chief of Transportation provided equipment and troop labor to the extent of his resources, and the Navy did likewise, but the supply fell far short of meeting the requirements in the Pacific. Those requirements were never static but expanded constantly as the Allied campaign moved northward and westward and one primitive port after another was set up as a base for further offensive action.

The retention of vessels by oversea commanders for intratheater use affected the movement of troops and supplies from the zone of interior to the theaters, since there was an over-all shortage of shipping. If made without approval of the War Department such retentions upset the movement plans of the General Staff, which were based on the Chief of Transportation's estimate of available vessels. Accordingly, it was agreed between the War Department and the War Shipping Administration that arrangements between theater commanders and the oversea representatives of WSA regarding retentions would not be permitted except in emergencies and that theater requests for vessels would be directed to the Chief of Transportation, who would make

[67] Memo, C of Trans Sv USAFIA for G-4 USAFIA, 24 Apr 42, quoted as reference 11 (a) in history of TC in Australia, Vol. I, 1942, OCT HB SWPA; Memo, Lt Col Alfred W. Parry and Lt Col Rudolph G. Lehnau for Gen Robinson, Contl Div ASF, 12 May 43, sub: Rpt on Insp Trip, OCT HB Gross Pacific Theater.

[68] Memo, CG SvC Noumea for CG SOS SPA, 19 Dec 42, sub: Congestion of Shipping at Noumea, OCT HB SPA New Caledonia; Rad, CG SOS WD for CG SOS SPA, 24 Jan 43, OCT HB Meyer Staybacks; Memo, CG SOS WD for VCNO USN, 12 Mar 43, sub: Congestion at Noumea and Espiritu Santo, OCT HB Meyer Staybacks; Memo, Gross for Styer, 11 Mar 43, OCT HB Gross Pacific Theater.

the necessary arrangements with WSA headquarters.[69]

The vessel requirements for intratheater shipments were especially heavy in the Southwest Pacific where each advance against the enemy was dependent on the availability of bottoms.[70] The early needs of this theater were met principally with British, Dutch, and Norwegian vessels, although a limited number of American ships were used.[71] A call by General MacArthur for additional vessels in September 1942 found all available shipping committed to the support of the impending invasion of North Africa.[72] During the following spring the progress of the campaign in the Mediterranean and the build-up of U.S. forces in the United Kingdom, which were the major undertakings of that period, placed a heavy strain on U.S. shipping resources and severely limited the number of vessels that could be assigned to the Southwest Pacific.[73] When in August 1943 General MacArthur indicated that a large additional permanent assignment of shipping was absolutely necessary to the launching of a sustained drive against the Japanese, the problem was placed before the Combined Chiefs of Staff, then in session at Quebec, and the maximum assignment was worked out.[74] It was made clear to General MacArthur, however, that ability to permanently assign additional vessels to him and still maintain an adequate schedule of transpacific sailings depended on his early release of vessels which he had temporarily retained under emergency arrangements with the representative of the War Shipping Administration in Australia.[75]

While theater retentions could be regulated in Washington, theoretically at least, the problem of slow oversea discharge was less amenable to control. Early in 1943 the San Francisco Port of Embarkation expressed the view that too many ports still were operating at peacetime tempo and proposed measures to correct the situation. The proposed measures were not adopted, no doubt because of the Chief of Transportation's lack of authority in the oversea commands, but the discussion of them led to the institution of semimonthly radio reports, to be submitted by all oversea theaters and bases, giving data regarding the number of ships in each port and the progress made in their discharge.[76] While the details of this plan were being worked out, the desirability of such reports was emphasized by General Somervell, who had visited the North African ports after the Casablanca

[69] Rad, CG SOS to CG USAFIA, 27 Jul 42, OCT HB Meyer Staybacks; Rad, CG SOS to ETOUSA, 30 Sep 42, OCT HB Meyer Staybacks; Ltr, CG ASF to CofS AFHQ North Africa, 17 Apr 43, OCT HB Gross Day File.

[70] See Rad, MacArthur to Somervell, 12 Jun 42, CM–IN 7259. In addition to transoceanic vessels, SWPA needed great numbers of smaller craft for coastwise and interisland operation.

[71] Ltr, WSA to Trans Sv SOS, 3 Jul 42, OCT HB Wylie Australia Mar 42–Jul 44. This file includes correspondence indicating numerous problems of control in connection with foreign flag vessels used in SWPA.

[72] Ltr, MacArthur to Somervell, 9 Sep 42; Handwritten Memo, Wylie for Gross, 26 Sep 42. Both in OCT HB Wylie Australia, Mar 42–Jul 44.

[73] Memo, Somervell for Douglas (WSA), 10 Mar 43, sub: Shipping Requirements for U.S. Army Forces, OCT 563.5 Misc.

[74] Rad, MacArthur to CG ASF, 14 Aug 43 (CM–IN 10721, 15 Aug 43); Rad from Quebec, Somervell to MacArthur, 18 Aug 43 (WD CM–IN 13773, 19 Aug 43).

[75] Rad, MacArthur to WD, 19 Aug 43, CM–IN 14061; Rad from Quebec, Somervell to MacArthur, 23 Aug 43 (WD CM–IN 17632, 24 Aug 43); Rad, Quebec to MacArthur, 24 Aug 43, WD CM–IN 18280.

[76] Telg, SFPE to CofT, 8 Jan 43 (CM–IN 3679, 9 Jan 43); Memo, Brig Gen Wylie for Lt Col Meyer, 17 Jan 43, OCT HB Wylie Urgent Matters 1943.

Conference.[77] From the data contained in these radiograms the Control Division in the Office of the Chief of Transportation prepared semimonthly summaries which compared the records of the several oversea commands and the individual oversea ports.[78]

Copies of the summaries of port performance were sent to the oversea commanders, and the rivalry which they created proved stimulating and soon was evidenced in improved dispatch of vessels in certain areas.[79] In the beginning they were confined to statistics, but later comments on the performances of the several ports and suggestions for the improvement of cargo handling were included. During a visit to the Pacific in the fall of 1943, General Gross observed that many port commanders were not receiving the summaries from their theater headquarters, and he instructed that thereafter copies be sent directly from Washington to the oversea ports.[80]

A study of the number of ships held in oversea ports more than ten days, during the period February 1943–July 1944, is presented graphically in Chart 6. The study, which excluded ships authorized for retention by or on permanent assignment to the theaters, showed that improvement took place in most areas during 1943, but that the number of 10-day vessels increased greatly in the North African theater in connection with the invasions of Sicily and Italy. The latter development was due to the limited port facilities, the necessity of holding ships for westbound convoys, and the theater's policy of accumulating large quantities of supplies in North Africa where they were sorted and reloaded for movement to the invasion areas—a plan which General Gross considered wasteful in view of the possibility of direct shipment from U.S. ports to the invasion areas.[81] During the first half of 1944 the number of 10-day vessels in the Mediterranean declined sharply but there were increases in the Pacific and European theaters in connection with actual or impending combat operations.

Consideration of Chart 6 must take into account the fact that during the period under review the total number of vessels in Army service was almost trebled. The study disclosed that, in proportion to the total number of cargo ships in Army service, the number of 10-day ships in oversea ports was less at the end of the period than at the beginning; also that the average days spent in port beyond 10 days decreased from 18 to 7. Nevertheless, the number of vessels held in the theaters for abnormally long periods was greater than could be sanctioned, in view of the over-all shortage of shipping. The study gave a clear emphasis to the fact that intensified combat activity

[77] Memo for Gen Gross, 19 Feb 43, OCT HB Wylie Urgent Matters 1943; Memo, C of Contl Div OCT for Col Stone, 10 Apr 43, OCT 565.2 Turnaround.

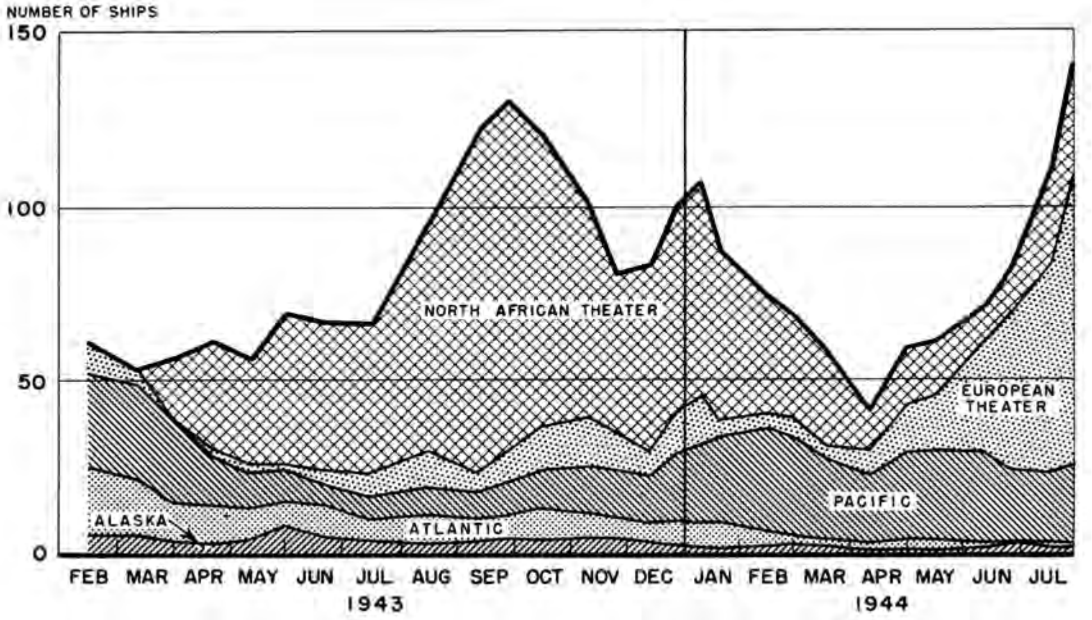
[78] Preparation of summaries later was transferred to Water Div, OCT. Beginning Jan 45 they were issued monthly instead of semimonthly. Incomplete set is in OCT HB Water Div Vessel Utilization Rpts.

[79] Memo, Gen Somervell for Admiral King, 26 May 43, ASF Hq Navy 1942–44.

[80] Ltr, Gross to Wylie, par. 10, 26 Sep 43, OCT HB Wylie Ltrs from Gross.

[81] Memo, Gross for Somervell, 18 Apr 43, sub: Early Date, HUSKY, OCT HB Wylie Shipping Requirements and Allocations 1943. The peak of the Mediterranean congestion was reached on 11 Oct 43, when there were 394 Allied ocean-going vessels in African, Sicilian, and Italian ports, of which 73 were known to be awaiting berths and 100 were not accounted for. See Memo, Col Stokes for Col Bathurst, 9 Nov 43, sub: JCS 569, OCT HB Plng Div Gen; see also Ltr, CofT ASF to CofT AFHQ North Africa, 25 Nov 43, ASF Hq Trans 1943.

CHART 6—U.S. DRY-CARGO SHIPS EMPLOYED IN TRANSOCEANIC SERVICE FOR THE ARMY HELD IN OVERSEA PORTS MORE THAN TEN DAYS: FEBRUARY 1943–JULY 1944.*



*Based on number of ships in ports more than ten days at the time reports were made.
Source: ASF MPR, Sec. 3, Transportation, Aug 44, p. 48.

in a theater involves increased shipping schedules and is very likely to result in slower dispatch for cargo vessels in the ports of that theater.

The delays suffered by shipping in the Pacific and the Mediterranean during 1942 and 1943 foreshadowed an even more serious situation which developed in 1944 in connection with the invasion of France and the accentuated drive against the Japanese. In compliance with requests from Army commanders of the European and Pacific theaters, an increasing number of ships was dispatched from the zone of interior, with the full realization that all could not be discharged promptly, but with no anticipation of the excessive delays which actually would be experienced. By August 1944 the number of ships being detained in those areas had reached a point where it adversely affected the over-all movement of supplies from United States ports.[82] At that time General Wylie informed General Gross that all possible pressure was being placed on the theaters to bring about a speedier return of vessels. That pressure did not accomplish the desired results, however, and the situation went from bad to worse until more drastic means were employed. Since the developments in the several theaters involved different circumstances, separate consideration is necessary.

In approaching the subject with reference to northern France, it is necessary to bear

[82] Memo, Wylie for Gross, 12 Aug 44, sub: Tr Mvmt Trends, OCT HB Wylie Staybacks.

in mind that the year 1944 witnessed the most intensive and at the same time the most critical invasion operation of the war.[83] The influence of the invasion on the movement of Army cargo to the European theater is seen in the fact that whereas during the six-month period, October 1943–March 1944, a monthly average of 85 fully loaded dry-cargo vessels was dispatched from U.S. ports, 133 were dispatched in the following April, and the number had increased to 194 by August.[84]

During August 1944 the War Department became deeply concerned because of the European theater's continued demand for more sailings from the United States, the small number of vessels actually discharged at Continental ports, the growing backlog of undischarged vessels, and the apparent desire of theater officials to have a bank of 100 to 150 vessels on hand at all times.[85] As a corrective measure, the theater was informed that each of the next six convoys would be reduced by ten ships. But early October found the situation worse rather than better. The theater then was advised, on recommendation of the Chief of Transportation, that sailings for October, November, and December would be programmed on the basis of its demonstrated ability to unload the ships, with the object of reducing the number of cargo vessels in Continental waters to between 75 and 85.[86] The theater expressed great alarm at this action, and stated that it expected to discharge 150 ships in October, 200 in November, and 270 in December.[87] But the Chief of Transportation adhered to his plan and convoy program, and in a further exchange of messages again explained to the theater that the continued use of so many vessels for storage purposes could not be permitted in view of the world-wide critical shipping shortage.[88] Meantime, the War Department had proposed and the theater had agreed that General Franklin, Assistant Chief of Transportation for Water Activities, should be detailed to the theater for about two months to assist in clearing up the shipping situation.[89]

General Franklin arrived in Europe on 28 October. In order to facilitate the accomplishment of his mission he was appointed Assistant Chief of Transportation, Communications Zone, European Theater of Operations, U.S. Army (COMZONE, ETOUSA), in charge of the Marine Operations Division. His early reports confirmed the suspicion which had existed in Washington that, in addition to the insufficiency of available port facilities for the prompt discharge of so many vessels, there was a necessity in the theater of using ships for storage because of the lack of adequate

[83] A more extensive account of the shipping crisis in ETO than can be given here is presented in OCT HB Monograph 29, pp. 361–88.

[84] Statistical table, Number of Cargo Ships Sailing to United Kingdom, prepared by Vessel Opns Analysis Br Water Div OCT, 8 Oct 45, OCT HB Water Div Vessel Opns Analysis.

[85] Rad, to ETOUSA, WAR 76034, 4 Aug 44; Rad, from ETOUSA, 42044 (CM–IN 15642, 17 Aug 44); Rad, personal Gross to Somervell (then in ETO), WAR 81787, 16 Aug 44; Rad, to ETOUSA, WAR 81853, 16 Aug 44; Rad, to ETOUSA, WAR 89859, 31 Aug 44; Rad, from ETOUSA, 46204 (CM–IN 13093, 14 Sep 44).

[86] Memo, Gross for Somervell, 5 Oct 44, OCT HB Gross ETOUSA Ship Situation; Rad, to ETOUSA, WARX 42318, 5 Oct 44.

[87] Rad, from ETOUSA, 8 Oct 44 (CM–IN 8626, 9 Oct 44).

[88] Rad, to ETOUSA, WARX 43793, 9 Oct 44; Rad, from ETOUSA, 26 Oct 44 (CM–IN 25856, 27 Oct 44); Rad, to ETOUSA, WARX 53834, 28 Oct 44.

[89] Rad, Marshall to Eisenhower, WAR 49595, 20 Oct 44; Rad, Eisenhower to Marshall, 21 Oct 44 (CM–IN 20423, 22 Oct 44); Ltr, CofT ASF to CofT COMZONE ETOUSA, 24 Oct 44, OCT HB Gross Day File.

depots and dumps.[90] Franklin reported that G–4, COMZONE, ETOUSA, had completely controlled the theater supply program, with only nominal co-ordination with the theater Chief of Transportation, Maj. Gen. Frank S. Ross; that the G–4 requests for more shiploads of supplies were based on unrealistic estimates of the theater's capacity to discharge; that in G–4 the resultant backlog of undischarged ships was considered unavoidable, and even beneficial in that it allowed a high degree of selectivity in putting supplies ashore.[91]

From his discussion of the subject with General Eisenhower, Franklin gained the impression that the Supreme Commander had not been kept fully informed regarding the shipping backlog. But an exchange of radiograms between Generals Somervell and Eisenhower in early November disclosed that the latter, despite the fact that there then were over 240 cargo vessels in the theater for Continental discharge, of which only about 60 actually were being discharged, believed that the increased use of Rouen and Le Havre and the prospective opening of Antwerp would enable the theater to meet its discharge estimates.[92] The Chief of Transportation again stood firm in his determination to reduce the sailings from U.S. ports until the rate of discharge in the theater actually had been increased. He also requested the theater to return some of the 61 vessels which it had retained for use in moving motor vehicles and stores from the United Kingdom to the Continent.[93]

It was evident up to this point that little progress had been made in harmonizing the War Department and the theater points of view. Recognizing this, and recognizing also the seriousness of the shipping situation, particularly as it related to his ammunition supply, General Eisenhower arranged late in November for three of his high-ranking officers, together with General Franklin, to proceed to Washington for a full discussion of the matter.[94]

After the return of these officers to the theater on 5 December, concrete steps were taken to regulate the shipping situation.[95] A Shipping Control Committee was set up, consisting of Maj. Gen. Royal B. Lord, Chief of Staff, COMZONE, Brig. Gen. James H. Stratton, Assistant Chief of Staff, G–4, COMZONE, and General Franklin, to study port conditions and bring the theater's requests for supplies within the quantities that could be landed. Procedures were established in the office of the theater chief of transportation whereby scheduled discharge and actual performance were compared daily, and estimates of future operations and shipping schedules were

[90] Rad, to ETOUSA, WARX 56447, 2 Nov 44.

[91] Ltr, Franklin to Gross, 5 Nov 44, OCT HB Gross ETO; Memo, Franklin for CofT ASF, par. 3c, 19 Jan 45, OCT HB Gross ETO; History of G–4, COMZONE, ETOUSA, Sec. I, p. 83, OCMH.

[92] Rad, Eisenhower to Somervell (CM–IN 4960, 5 Nov 44); Memo, Franklin for CofT ASF, par. 3b, 19 Jan 45, OCT HB Gross ETO. The total of 243 cargo vessels in ETO for Continental discharge on 30 Oct 44 consisted mostly of vessels loaded in U.S. but included some loaded in UK.

[93] Rad, to ETOUSA, WARX 58388, 6 Nov 44; Memo, C of Ship Contl Br Contl Div OCT for Col Meyer, 21 Nov 44, OCT HB Water Div Vessel Opns Analysis; Rad to ETOUSA, WARX 66841, 22 Nov 44. Authorized retentions in ETO already had been reduced from 152 on D Day. See statistical table, Vessels Retained in Theaters, OCT HB Water Div Vessel Opns Analysis.

[94] Memo, CofT for ACofS OPD WDGS, 11 Nov 44, sub: Cargo Shipping for ETO, OCT HB Wylie Staybacks; Ltr, CofS USA for Mr. James F. Byrnes, Dir Office of War Mobilization, 22 Nov 44; Memo, ACofS OPD for CG ASF, etc., 25 Nov 44. Last two in OCT HB Gross ETO.

[95] Ltrs, Franklin to Gross, 11 Dec 44 and 31 Dec 44; Memo, Franklin for CofT ASF, par. 5, 19 Jan 45. All in OCT HB Gross ETO.

reviewed and revised when necessary. A Diversion Committee was established to arrange the allocation of vessels to discharge ports and assure their prompt assignment to berths.

The opening of Antwerp to Allied traffic on 28 November brought general relief to the shipping situation in northern Europe. The difficulty of making full use of this large port, because of the limited capacity of forward dumps to receive supplies, was partially overcome by storing the cargoes in the port area. This procedure, which was applied also at Le Havre, naturally resulted in a rapid accumulation of matériel in covered and open storage at the ports and therefore interfered with operations in general. Because of this situation, General Gross, who visited the theater briefly in December, arranged to detail Col. Leo J. Coughlin, chief of his Transit Storage Division, to ETOUSA to aid the theater chief of transportation in working out a plan to improve port fluidity.[96]

General Franklin returned to the United States on 13 January 1945 and reported that the primary purpose of his mission, which was to bring the theater shipping program and its capacity to receive cargo into balance, had been accomplished.[97] He believed that the procedures established and the control responsibility assigned to the theater Chief of Transportation would assure the maintenance of that balance. Franklin remarked, however, that the establishment of intermediate depots with sufficient capacity to accommodate supplies which the forward dumps could not receive —a development considered necessary as a means of relieving the ports of congestion— remained to be accomplished, although action in that direction had been initiated. In mid-February Lt. Gen. John C. H. Lee, Commanding General, COMZONE, ETOUSA, stated that the discharge rate and the movement forward from the ports were at last showing signs of consistent improvement.[98]

The status of the cargo ships which had been loaded in the United States for discharge in northern Continental ports, from 1 September 1944 to 31 March 1945, is shown in Chart 7. The large accumulation of idle vessels in Europe during October and November and the effect of that backlog on the number of vessels permitted to sail to Europe are clearly evident. As soon as the number of vessels awaiting call to discharge ports and waiting at the ports to begin discharge was substantially reduced, the number en route from the United States increased.

Appraisal of the theater's responsibility for this shipping crisis must take into account a number of facts. The military operation, as General Eisenhower pointed out, was of unprecedented scope and character, and the logistical problems involved were not solvable merely by the application of existing rules.[99] After the break-through at St. Lô, the campaign progressed with unforeseen rapidity, and it was not unnatural that theater personnel responsible for the supply of the forces should have concerned themselves first with the avoidance of matériel shortages, rather than with the world-wide shipping situation. In COMZONE, action was dominated by supply considerations, and, acting without due advice from

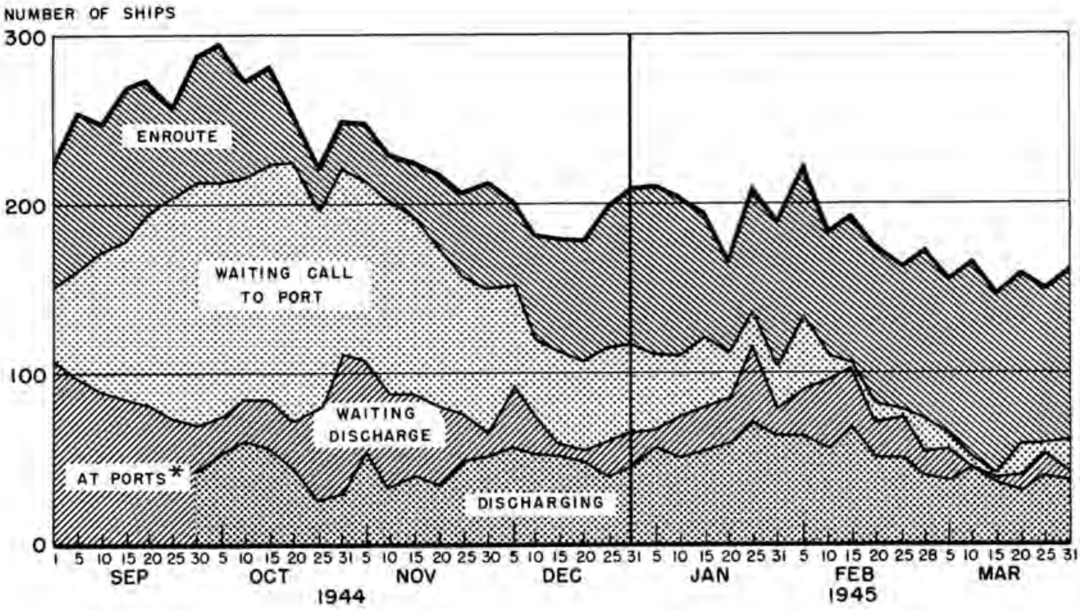
[96] See Rpt, Col Coughlin to Maj Gen Frank S. Ross, CofT COMZONE ETOUSA, 19 Feb 45, OCT HB ETO France Ports.

[97] Memo for CofT ASF, par. 6, 19 Jan 45, OCT HB Gross ETO.

[98] Ltr, Lee to Somervell, 17 Feb 45, OCT HB Gross ETO.

[99] Rad to Somervell, 5 Nov 44, CM-IN 4960.

CHART 7—STATUS OF DRY-CARGO VESSELS LOADED BY THE U.S. ARMY AT U.S. PORTS FOR DISCHARGE IN NORTHERN CONTINENTAL EUROPE: 1 SEPTEMBER 1944–31 MARCH 1945.



*Separate data not available for September 1944.

Source: Data compiled by Vessel Opns Analysis Branch, Water Div, OCT; published in ASF MPR, Sec. 3, issued during the period, or on file in Statistics and Progress Branch, Management Div, OCT.

the theater Chief of Transportation, G–4 failed to allow for contingencies and took too optimistic a view of the capacity of the ports to discharge and forward cargo.[100] A number of French ports which had been included in the early planning were not captured or were not usable when captured, and other French and Belgian ports did not become available until much later than had been anticipated. The large number of trucks required for the support of the Armies in their drive across France reduced the number of vehicles available for moving cargoes out of the ports.[101] The swift military developments and the possibility of an early termination of hostilities for a time left room for doubt as to the need for an extensive intermediate depot system to function between the ports and the forward dumps.[102] A large proportion of the vessels dispatched from U.S. ports were so-called commodity-loaders, each containing supplies of the same type or related types and

[100] See Rpt, ACofS G–4 COMZONE ETOUSA, Shipping Situation and Supply Requirements, 1 Dec 44, p. 2, OCT HB ETO France Ports.

[101] Ltr, Gen Ross to Dr. H. Larson, Trans Sec OCMH, 26 Apr 50, OCT HB ETO France Ports.

[102] See Rpt, Gen Bd ETO, sub: Supply and Maintenance on the European Continent (Study 130), pp. 65, 116, OCT HB ETO Gen Bd Rpts; Rpt, Maj Gen LeR. Lutes to Gen Somervell, 24 Jan 45, sub: Mission to ETO, 4 Dec 44–13 Jan 45, pp. 3, 248, AG Hist Rec Sec.

loaded well in advance of the actual need for the supplies; therefore a strict observance of priorities was not possible and much matériel not currently needed arrived in European waters.[103]

In the Mediterranean the accumulation of shipping, which had developed in connection with the invasion of Sicily and Italy and then had subsided, again appeared as the time approached for the invasion of southern France in August 1944. While many ports were used in mounting this invasion the chief burden fell on Naples, which also was the principal port of entry for supplies used in the campaign up the Italian boot.[104] As in the case of northern France, pressure was exerted by the Chief of Transportation to speed up the discharge of vessels and to hasten the return of ships which had been temporarily assigned for intratheater operation. In this instance better results were obtained.[105] The opening of the port of Marseille to Allied vessels early in September was followed by a close regulation of traffic within the Mediterranean, and a judicious restraint was exercised in calling for more supplies from the zone of interior. In late July, just prior to the assault, there were 138 cargo vessels in the Mediterranean theater earmarked for use in the invasion.[106] On 30 October there were 62 U.S.-loaded cargo vessels discharging or awaiting discharge in southern France, 25 vessels were en route from the United States, and an undetermined number of the 62 retentions which were charged to the Mediterranean theater were being used to move intratheater cargo to southern France.[107] By late November the danger of serious ship congestion in the south of France had passed and it was found expedient to divert to Marseille a limited number of vessels originally planned for discharge at northern French ports.[108]

The fact that shipping was handled more successfully in southern France than in the north was due in part to the promptness with which Marseille and other southern ports were brought under U.S. control, but an additional factor was the position of authority awarded to Brig. Gen. George C. Stewart, first as Chief of Transportation, Services of Supply, Mediterranean Theater of Operations (SOS, MTOUSA), and later as Transportation Officer, Southern Lines of Communication (SOLOC), ETOUSA, and the consequent closer co-ordination between supply requisitions and port discharge and clearance capabilities.[109]

The port congestion in the Southwest Pacific Area, which had disturbed the Chief of Transportation from 1942, took on a much more serious aspect in the fall of 1944 in connection with the invasion of Leyte. Its significance from the standpoint of the general shipping shortage was heightened

[103] See Rad, Somervell to Eisenhower, WARX 56447, p. 3, 2 Nov 44.

[104] Memo, Gen Lutes ACofS ASF for CofT, 25 Jul 44; Memo, ACofT for Gen Lutes, 12 Aug 44. Both in OCT HB Wylie Staybacks.

[105] Rad, CG AFHQ Caserta to WD, 16 Jul 44 (CM–IN 13484, 17 Jul 44), OCT HB Wylie Shipping for Med Opns 1944; Ltr, CofT ASF to Brig Gen George C. Stewart CofT MTOUSA, 9 Sep 44, OCT HB Gross Med Theater; Rad to CG MTOUSA, 23 Nov 44, OCT HB Wylie Staybacks; Ltr, CofT ASF to Gen Stewart Trans Off SOLOC ETO, 5 Dec 44, OCT HB Gross ETO.

[106] Summary of Med Cargo Activity, based on CM–IN 16875, 20 Jul 44, OCT HB Wylie Shipping for Med Opns 1944.

[107] ASF MPR, Sec. 3, Dec 44, pp. 56, 60.

[108] Rad to CG ETOUSA, 24 Nov 44, OCT HB Wylie Staybacks; Memo, Wylie for Somervell, 1 Jan 45, sub: ETO Shipping Situation, OCT HB Wylie Staybacks; Ltr, Lt Gen J. C. G. Lee, CG COMZONE ETOUSA, to Gen Somervell, 17 Feb 45, OCT HB Gross ETO.

[109] See Ltr, Stewart to Gross, 23 Aug 44, OCT HB Gross ETO. SOLOC was established in ETO in Nov 44. OCT HB Monograph 29, p. 301.

by the concurrent immobilization of a great number of cargo vessels in European waters. In SWPA the problem involved not only the shipping engaged in transpacific service but also the large number of ships temporarily retained in the theater or permanently assigned to it. Between early September 1944 and mid-November the number of transpacific vessels en route to or arrived in SWPA increased from 110 to 197, and the number of ocean-going vessels employed within the theater increased from 235 to 279.[110] During this period the number of vessels of both categories which were idle waiting to discharge or load mounted steadily.

Beginning early in November the Chief of Transportation adopted aggressive measures in his effort to improve the situation in the Southwest Pacific.[111] Although the theater promised improved discharge, General Gross and his staff foresaw that this measure alone would not solve the problem and that a reduction of sailings from the United States and a curtailment of theater retentions were necessary. On 4 November, according to Washington records, 180 vessels were committed to the Leyte operation, including those already at Leyte, those in the theater loaded or scheduled to load for Leyte, and those en route from U.S. ports.[112] It was obvious to the Washington authorities, in view of the limited facilities at Leyte and interruptions caused by suicide planes and other enemy activities, that the discharge of so many ships could not be accomplished without long delays. The theater was urged, therefore, to "tailor" its shipping program to a "realistic discharge capability."

On 22 November 1944 the War Department informed General MacArthur that the world-wide shipping situation had been presented to the President, who had instructed the Joint Chiefs of Staff to take immediate steps to reduce the number of idle cargo vessels overseas.[113] He was urged at that time to limit the number of retentions in the Southwest Pacific to 170, despite the fact that a larger number had been authorized. On 8 December SWPA was instructed to reduce its retentions to 100 by 15 January 1945 and also was informed that the number of sailings from the United States would be reduced.[114]

The theater vigorously protested these actions. It stated that the shipping backlog was the result of adverse weather, enemy interference, and a major change in operational plans which had advanced the campaign by two months. General MacArthur, in a personal message to General Somervell, recommended that the contemplated curtailment of shipping be postponed for two months until success was assured for the campaign, which was then approaching the critical phase.[115] He had in mind, of course, the invasion of Luzon, which began 9 January 1945. The War Department insisted, however, that its program made generous provision for all contingencies and pointed out that supplies could be delivered to the theater at a faster rate when the shipping

[110] ASF MPR, Sec. 3, Dec 44, p. 63.

[111] Rad to SWPA, WARX 58097, 5 Nov 44; Rad from SWPA, 9 Nov 44, CM-IN 8563; Rad to SWPA, WARX 61746, 11 Nov 44.

[112] Rad to SWPA, WARX 64641, 17 Nov 44. The theater reported 141 ships committed to Leyte as of 15 Nov 44, according to its records.

[113] Rad, WAR 67064.

[114] Rad, WAR 74552.

[115] Rad from SWPA, 23 Nov 44 (CM-IN 23048, 24 Nov 44); Rad, MacArthur to Somervell, 11 Dec 44 (CM-IN 12436, 13 Dec 44).

congestion had been reduced and vessel turnaround improved.[116]

The measures by the War Department, together with actions taken concurrently by the Joint Chiefs of Staff, brought results. A detailed study of the shipping situation in the Philippine area, made by theater officials in January 1945 at the request of the Chief of Transportation, indicated that the theater, although still somewhat too optimistic in its estimate of discharge capability, was nevertheless approaching the subject with a new point of view and understood the War Department's position.[117]

The number of ocean-going vessels engaged in moving cargo to and within the Southwest Pacific Area prior to the German surrender reached a peak of approximately 500 on 20 January 1945, of which about 200 were in transpacific service and about 300 employed within the theater.[118] During February the number of vessels in service within the theater leveled off to about 200, near which figure it remained until V-J Day.[119] The number of transpacific vessels en route to or arrived in SWPA also declined, and on V-E Day it stood at 118. After V-E Day the number of transpacific vessels mounted rapidly and reached a peak of about 450 in mid-August 1945. The last figure included about 300 vessels which were in service between the United States and the theater and about 150 which were being redeployed from Europe. The situation arising from this new influx of shipping will be discussed later.

The circumstances cited by the theater in explanation of the congestion which existed in the Southwest Pacific during late 1944 and early 1945—particularly the changes in strategic plans and their disturbing effect on the program for "rolling up" supplies, equipment, and troops from rear bases to forward areas—unquestionably had much to do with the development of the unhealthy shipping situation. The necessity of utilizing primitive ports, such as Hollandia and Finschhafen, in support of large combat operations, and the lack of adequate floating equipment, warehouses, dumps, trucks, and labor at such ports, constituted serious handicaps.[120] The inability to enforce a program of priorities because of uncertainty as to when and where specific supplies would be needed and the lack of adequate facilities for unloading, storing, and sorting such supplies resulted in a practice of "selective discharge" which kept many vessels out of active service. This practice involved unloading only the items which were needed immediately and leaving the balance of the cargoes in the ships for future discharge. An order issued in October by the Chief Regulating Officer, GHQ, SWPA, that selective discharge should be confined to cases of absolute necessity had only limited effect, because the decision as to when absolute necessity existed rested entirely with local officials whose views were governed by local considerations.[121]

While physical conditions and strategic developments were unfavorable to the ex-

[116] Rad, Somervell to MacArthur, WARX 76544, 13 Dec 44.

[117] Memo, Wylie for Gross, 22 Jan 45, sub: Southwest Pacific Situation, OCT HB Wylie Shipping in Pacific 1944–45.

[118] ASF MPR, Sec. 3, Feb 45, p. 50.

[119] ASF MPR, Sec. 3, Mar 45, p. 46; Aug 45, p. 48.

[120] See Ltrs, Mr. H. L. Schage, WSA Regional Dir for Forward Areas, SWPA, to WSA officers in U.S., 24 Nov 44, 27 Nov 44, 28 Nov 44, 9 Dec 44, 9 Jan 45, OCT HB Wylie Shipping in Pacific 1944–45.

[121] Order to all Regulating Officers, 20 Oct 44, OCT HB Wylie Shipping in Pacific 1944–45.

peditious dispatch of ships, administration also had a bearing on the problem in the Southwest Pacific Area. The preparation and execution of theater shipping programs were controlled, from November 1943, by the Chief Regulating Officer, who was attached to General Headquarters. The function of this officer was to assign priorities to movements of troops and matériel by water, rail, and air, and to co-ordinate movements so as to obtain the maximum service from all transportation resources. His attachment to the theater GHQ is explained by the fact that his task involved the traffic and the means of transport of all forces operating in the theater—the U.S. Army, the U.S. Navy, and the forces of our Allies.[122]

Reference was made in Chapter III to the fact that the Chief of Transportation, U.S. Army Services of Supply (USASOS), was not given the recognition and authority in SWPA which General Gross believed he should have had. This was true before the establishment of a chief regulating officer and it was increasingly so thereafter. The chief regulating officer placed representatives at the important bases in the theater and exercised his prerogatives broadly. According to Maj. Gen. James L. Frink, Commander of USASOS, the CRO organization had "complete control of all vessels" and what amounted to "the management of the transportation system of the theater." [123] Col. William W. Wanamaker, Chief of Transportation, USASOS, reported to General Gross that the GHQ Regulating System was "on record as running shipping" and that it was proud of its control; in late November 1944 he stated that he had just had his first opportunity to attend a GHQ meeting with regard to shipping and to present his views.[124] The Deputy Chief Regulating Officer, on the other hand, asserted that the responsible officers of G-4 and USASOS insisted on moving supplies forward regardless of his recommendation that they be retarded, were ineffective in their planning, and failed to supervise the loading of vessels adequately. He stated also that after ships had been loaded at rear bases in the theater their movement forward was controlled by the commander of the port of destination and the Navy, not by the CRO.[125]

Whatever the merits of the respective positions, there evidently was a lack of understanding and co-operation within the theater regarding the use of shipping. In the Office of the Chief of Transportation in Washington it was felt that, had the chief of transportation for the U.S. Army in SWPA, as technical transportation officer of the force which moved the bulk of the supplies to and within the theater and provided the bulk of the shipping, been given a greater voice in the control of movements and the

[122] History of the General Headquarters Regulating System, prepared in the Office of the Chief Regulating Officer, GHQ, SWPA, 31 Aug 45, OCMH; Rpt, Col H. Bennett Whipple, Deputy CRO, GHQ Regulating System, 15 Jan 45, OCT HB SWPA CRO; Monograph, U.S. Army Transportation in the Southwest Pacific Area, 1941–1947, by James R. Masterson, Ch. XV, OCT HB Monographs.

[123] Memo for COMINCH SWPA, 19 May 44, sub: GHQ Regulating System, and atchd Memo, same date and title, OCT HB Exec Trans Opns SWPA.

[124] Ltr to CofT ASF, 27 Nov 44, last par., OCT HB SWPA Philippines Misc.

[125] Ltrs, Col. H. Bennett Whipple to Col. Luke W. Finlay, 24 Oct 44, 26 Oct 44, 23 Nov 44, 26 Dec 44, OCT HB Exec Trans Opns SWPA; Rpt, Col. H. Bennett Whipple, 21 Nov 44; Ltrs, Whipple to Finlay, Exec OCT ASF, 3 Dec 44, 12 Jan 45, 22 Jan 45. Last four in OCT HB Wylie Shipping in Pacific 1944–45.

utilization of vessels, the congestion which developed could have been at least ameliorated. In the Southwest Pacific, as in Northern Europe, the co-ordination between supply movements and the capabilities of the ports to receive and distribute the cargoes appears to have been inadequate, with supply considerations dominating.[126]

When General Wylie visited General MacArthur in Manila in April 1945, the latter took full responsibility for the shipping congestion which had developed during the campaign to recapture the Philippines. He believed that the hastening of the military advance justified the logistical confusion which resulted. But it is doubtful that General MacArthur, concerned primarily with the success of his own combat operations, was fully aware of the seriousness of the world-wide shipping situation until it was forcefully brought to his notice by the President's intervention, or that he realized that the congestion in SWPA might have been relieved, without jeopardy to his military plans, by concerted action within his own command.[127]

The intervention of the President in the shipping crisis and the actions taken thereafter by the Joint Chiefs of Staff were precipitated by an urgent plea by the War Shipping Administrator for vigorous and co-ordinated action. The administrator was under constant pressure to provide more vessels for the military programs and to curtail the lend-lease and other nonmilitary programs to that end. Under these circumstances it seemed inexcusable, from his point of view, that so many cargo ships should be immobilized in the theaters and that the armed forces should not have taken effective action to rectify that situation. The War Shipping Administrator stated that on 15 November 1944 there were nearly 400 WSA-controlled vessels retained in the theaters for local use and that about 350 vessels which had been allocated to the Army and the Navy for transoceanic service were lying idle overseas.[128]

The fact that the Joint Chiefs of Staff presented this matter to the President indicates that the military authorities in Washington were well aware of the difficulties of the problem and that they believed the authority of the Chief Executive was needed in support of any drastic action to regulate the use of vessels in the theaters. The President's response to JCS was prompt and explicit. He stated that he regarded the shipping situation secondary in importance only to the military operations. He indicated the extent to which nonmilitary shipping programs could be cut, instructed the Navy, the War Shipping Administrator, and the Director of War Mobilization to take certain actions with a view to speeding up the completion of new ships, and directed the Chiefs of Staff to make urgent representations to the theater commanders to improve their utilization of vessels.[129] JCS took immediate steps to carry out the President's instructions, and, in accord with recommendations submitted by the Joint Military Transportation

[126] Memo, Gen Wylie for Gen Wood ASF Hq, 19 Dec 44, sub: SWPA Shipping Situation, OCT HB Wylie Shipping in Pacific 1944–45.

[127] Gen Wylie, Notes on Trip to POA and SWPA, 19 March to 22 April 1945, p. 10, OCT HB Wylie Pacific—Rpts of Visits; Ltr, Whipple to Finlay, 26 Dec 44, OCT HB Exec Trans Opns SWPA.

[128] JMTC 88th Mtg, 14 Nov 44; JCS 1173, 17 Nov 44; JCS 1173/1, 18 Nov 44; Memo, Admiral Land WSA for JCS, 22 Nov 44, ASF Hq Shipping 1944.

[129] JCS 1173/2, 21 Nov 44.

Committee, adopted a definitive course of action.[130]

The basic action by the Joint Chiefs of Staff was taken on 9 December 1944, when instructions were dispatched by radio to Army and Navy commanders in the theaters, with information copies to representatives of the War Shipping Administration overseas and to the appropriate Army and Navy officials at U.S. ports.[131] The message stated that the critical shortage of ships was due primarily to the retention of large numbers of vessels in the four major theaters and that the inability of the theaters to release the vessels promptly was due largely to their overestimation of discharge capability.[132] It announced certain policies to be applied in remedying the situation. The use of ocean-going ships for storage purposes was prohibited. A realistic estimate of port capacity was declared imperative. Factors of safety applied to supply requirements, which resulted in ships being held idle awaiting calls to operational areas, were to be reviewed and scaled down. Selective discharge, or the partial unloading of ships, was to be discontinued. The diversion or delay of large vessels to load or discharge small tonnages was prohibited, except in cases of emergency. Detailed ship position and employment reports, as prescribed by the War and Navy Departments, were to be submitted expeditiously. The designation of a single theater agency to control shipping was considered the most effective way to implement these policies. The War Department was made responsible for supervising the utilization of shipping in the European, Mediterranean, and Southwest Pacific theaters, and the Navy Department was given similar responsibility for the Pacific Ocean Areas.[133]

Other steps were taken toward the same objective. In order to standardize ship activity reports from the theaters and at the same time reduce the load on communications, the Joint Chiefs of Staff prescribed a form of weekly radiogram which was to constitute the joint report of the military authority and the War Shipping Administration representative in the respective oversea areas.[134] These ship activity reports assured prompt and uniform information reaching all interested agencies in Washington and facilitated joint action when such action became necessary. In order to establish a more satisfactory distribution of shipping in the Pacific Ocean Areas, where the Navy had the superior authority but where the Army had large forces and hence large shipping requirements, a detailed procedure was adopted by JCS to govern the establishment of shipping requirements and the allocation and control of cargo vessels in that area.[135] Since the ceilings previously established by the Joint Military Transportation Committee to control ship retentions in the theaters had been largely vitiated by the

[130] Memo, Gen Marshall for Gen Somervell, 22 Nov 44, ASF Hq Shipping 1944; Memo, CG ASF for CofS USA, 23 Nov 44, ASF Hq Shipping 1944; JCS 1173/4, 25 Nov 44; JCS 1173/7, 5 Dec 44; JCS 1173/8, 8 Dec 44.

[131] WARX 74985.

[132] The four major theaters were ETO, MTO, and SWPA (under Army commanders), and POA (under Navy commander).

[133] These instructions were published in JCS Policy Memo 7, 10 Dec 44. According to ACofT, the Navy Department had not intervened in POA shipping matters prior to this JCS action. See Memo, Gen Wylie to Gen Wood ASF Hq, 19 Dec 44, OCT HB Wylie Shipping in Pacific 1944–45.

[134] Rad to Army theater comdrs, WARX 78668, 16 Dec 44; Rad, CNO USN to CINCPOA, 16 Dec 44 (WP CM–IN 17710, 18 Dec 44); OCT 565.2, Ship Activity Rpts, contains some theater reports sent in response. Ship activity reports were known by the short title, ACTREP.

[135] JCS 762/10, 20 Dec 44; JCS Policy Memo 8, 26 Dec 44.

indefinite detention of vessels which ostensibly were engaged in transoceanic service, it was stipulated that any ocean-going vessel not already charged as a temporary (rotational) retention, or as a permanent assignment (local fleet ship), automatically would be charged as a retention if it remained in the theater more than 30 days.[136] The operation of the new ship control plan was facilitated by a glossary of terms to assure correct interpretation by the oversea commanders of joint instructions issued from Washington.

Although, as already indicated, the measures prescribed by the Joint Chiefs of Staff brought about general improvement in the oversea shipping situation during the spring and early summer of 1945, the problem reappeared before the summer was over. After the termination of hostilities in Europe attention was centered on the build-up of personnel and matériel in the western Pacific for the final assault on Japan. In August 237 ocean-going vessels arrived in the Philippines, and September brought 216 arrivals.[137] Manila was the principal base for the operation and had a heavy influx of shipping from the United States, Europe, and from other Pacific bases. After September the cargo ship arrivals fell off sharply, but the number of vessels on hand remained high for several months.

The reasons for the rapid increase in the number of vessels at Manila were several.[138] The facilities of the port had suffered severe damage during the Japanese occupation and evacuation, so that unloading operations were handicapped. After the Japanese surrender there was a period of uncertainty as to what matériel should be discharged, what should be returned to the United States, what should be forwarded to other bases in the western Pacific, and what would be required in the occupation of Japan.[139] In order to provide ships to move the occupation forces and their matériel to Japan, cargoes were unloaded which, together with other cargoes, had to remain on the Manila docks indefinitely because there were no rail connections and the number of trucks available for dock clearance was inadequate. Although the Chief of Transportation exerted such pressure as he could to get the idle ships at Manila released, full results had to wait upon logistical plans and policy decisions which had not been formulated when the enemy capitulated.

The end of the fighting and consequent logistical readjustments resulted in the detention of ships not only at Manila but elsewhere in the Pacific, including Japanese ports. In November 1945 General MacArthur was urged to use all possible means to return to the United States cargo vessels which had been in his command unduly long, since the War Shipping Administration still was critically short of fast ships for military and commercial uses and the

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136 Memo, TAG WD for Comdrs of all Theaters, 5 Feb 45, sub: JMTC Memos, and Incl Memos, AG 334 JMTC, 13 Feb 45 (1).

137 Monthly History of TC AFWESPAC, p. 5, Sep 46, OCT HB SWPA Philippines; Chart, Ship Position—WESPAC, 23 Nov 45, OCT HB Water Div Vessel Opns Analysis.

138 Confs, author with Col Thomas Fuller, Deputy CofT OCT AFWESPAC and Lt Col Thomas R. Palmerlee, Dir Mvmts Div OCT AFWESPAC, 14 Jul 48, OCT HB SWPA Philippines.

139 Memo, Maj Rau, G–4 Requirements, for Lt Col Fernandez, 17 Oct 45, sub: Vessels Returned to U.S. and Diverted to Occupational Area, in folder, Col Stokes' Pacific Trip, OCT HB SWPA Philippines Misc; Rads to Army Forces Pacific Administration Manila, WARX 12884, 12 Oct 45 and WARX 77121, 19 Oct 45.

slower vessels were required for the civilian aid programs.[140]

The subjoined tabulation, showing the cargo discharge performances of the several oversea areas during the period from April 1943 through August 1945, is of interest in the light of the foregoing discussion.[141] The net discharge rates are based on the time the ships were actually worked, and the gross discharge rates on time elapsed from arrival at discharge ports to completion of discharge. A high percentage relationship of gross rate to net rate indicates that the proportion of idle ship time in the area was low; conversely, a low percentage relationship of gross rate to net rate indicates a high proportion of idle ship time. The following rates represent average measurement tons of cargo discharged per ship per day:

Oversea Area	*Net Discharge Rate*	*Gross Discharge Rate*	*Gross Rate as Pct. of Net Rate*
All Areas	1,215	810	66.7
India–Burma	2,752	2,046	74.3
Middle Pacific	1,585	1,030	65.0
European	1,322	958	72.5
Caribbean–South Atlantic	1,265	830	65.6
Mediterranean–Africa–Middle East	1,132	740	65.4
North American–Greenland–Iceland	1,111	684	61.6
Southwest and Western Pacific	797	491	61.6

The India–Burma area, which turned in the best average discharge performance for the period, had the advantage of good port facilities, plentiful labor, and freedom from the disturbing influence of enemy interference or radical changes in strategy. The southwest and western Pacific area, which gave the poorest average performance, had none of these advantages and suffered more or less throughout the period from the adverse conditions which were discussed earlier in this section. Although conditions in Europe were bad during the latter part of 1944 following the invasion of the Continent, before and after that period the dispatch of vessels was favored by the existence of numerous well-developed ports, an adequate supply of labor, and a close coordination between cargo movements and port capacities. The area record in the middle Pacific, although adversely affected by conditions at many small ports, was helped by the good performance at the important and well-equipped port of Honolulu.[142]

While recognizing that conditions in some of the theaters were unfavorable to the quick dispatch of cargo vessels, General Gross believed that the waste of shipping overseas could have been reduced by better management. In March 1944 he referred to the

[140] Ltr, WSA to ACofT, 26 Oct 45, OCT HB Wylie Staybacks; Rad to Army Forces Pacific Command Tokyo, WARX 80943, 2 Nov 45.

[141] Monthly Vessel Utilization Summary, Aug 45, OCT HB Water Div Vessel Utilization Rpts. Data are based on rpts from theaters to OCT up to Dec 44 and thereafter on ACTREP. Only vessels carrying Army cargo into the areas are included, not those carrying intra-area cargo.

[142] For this study the central Pacific ports west of Hawaii were excluded because they were served chiefly by cargo ships under Navy control.

heavy requisitions for ships in connection with forthcoming military actions, stated that he feared serious congestion at the oversea ports, and remarked that "fewer ships with less congestion might actually transport more tonnage to support the operations." [143] In his final report, among the conclusions, he referred to the requisition of excessive quantities of supplies by the oversea commands, a course of action which resulted in larger stocks being accumulated in the theaters than could be properly administered, ships being held idle for excessive periods because of congestion at the ports, and unnecessarily large numbers of ships being required to roll up supplies from rear to forward bases.[144] Elsewhere in his report General Gross termed this one of the logistical mistakes of the war and remarked that, since it had been demonstrated that supplies could be furnished promptly and reliably from the zone of interior to forces fighting on the opposite side of the globe, the mistake ought not to be repeated.

Ship Conversions

The heavy burden imposed on the facilities available for ship repair and conversion work was discussed in Chapter V, and also the measures adopted by the Army, the Navy, and the War Shipping Administration to co-ordinate their activities and obtain maximum results from those facilities. The purpose of this section is to present somewhat more detailed information regarding the Army's activities in connection with the program of ship conversion. Early in the war numerous prewar passenger vessels were altered to prepare them for service as troopships, troop accommodations were installed on a limited number of prewar freighters, and many vessels were provided with hatches of greater size and gear of greater strength so that they could handle the bulky and heavy items of Army equipment.[145] By special arrangement with the Navy, the Army converted one cargo vessel and six troopships to combat loaders for use in the invasion of North Africa in the fall of 1942.[146] The principal conversion program did not get under way until 1943, however. It involved the alteration of both new and old cargo and passenger vessels into troopships, hospital ships, and various types of special-purpose ships which the scope and character of the war made necessary.[147]

A proposal for converting new cargo ships, built by the Maritime Commission, into troopships was approved by the Joint Chiefs of Staff in the fall of 1942.[148] With

[143] Ltr to Brig Gen G. C. Stewart, 18 Mar 44, OCT 319.1 Italy 1945 Geog.

[144] Gross final rpt, pp. 59, 125. See also Maj Gen C. P. Gross, "Some Lessons from World War II," *Army Transportation Journal* (November–December 1947), p. 38.

[145] Regarding cargo ship alterations see address by Brig Gen Robt. H. Wylie ACofT before National Maritime Conf, pp. 5–7, 16 Oct 46, OCT HB PE Gen Transport Equip and Supplies.

[146] Memo, Water Div OCT for Supt ATS NYPE, 10 Aug 42, sub: Conversion of Vessels to Modified Combat Loaders, OCT 000–900 Combat Loaders; Conf, author with Geo. A. Anthony, Naval Architect Water Div OCT, 26 Jan 48, OCT HB Water Div Ship Repair and Conv.

[147] Col M. B. Stokes, Jr., Shipping in War, pp. 17, 21–23, OCT HB Topic Logistics; Memo, C of Water Div OCT to Maj Cooper, 13 Sep 45, sub: Lessons Learned World War II, OCT HB Water Div Ship Repair and Conv.

[148] See Ltr, WSA for Admiral Leahy, White House, 24 Sep 42, OCT 564 Army Vessels. All major conversion projects were authorized by JCS, usually on recommendation of JMTC.

the existing troop lift being utilized to the utmost, it became apparent that planned oversea military operations would be delayed if they had to await the completion of new troopships. Cargo vessels on the other hand were being delivered more rapidly than had been anticipated, and the time required for their construction and conversion was relatively short. Accordingly, JCS decided to meet the demand for increased troop lift by installing troop accommodations on several types of new cargo vessels. This project was greatly expanded during 1943 as strategic requirements increased, and it was continued to the end of the war and into the repatriation period.

In some cases the conversion of cargo ships to troopships was made while the vessels were under construction, in accordance with Maritime Commission contracts; in some cases the alterations were made on vessels already delivered, under War Shipping Administration contracts; in a limited number of instances WSA vessels were converted under contracts placed by the Transportation Corps. In all cases, however, the alterations were in accordance with Army requirements and plans approved by the Transportation Corps. In order to avoid unnecessary expense and delay resulting from hastily considered requests for departures from the basic conversion plans, WSA stipulated that such changes, if they involved an expenditure of $50,000 or more, would not be undertaken until the plans and specifications had been approved in writing by an authorized representative of the Chief of Transportation.[149] Since the primary object of the program was to make additional troop lift available with the least possible delay, it was arranged that certain technical requirements of the U.S. Coast Guard could be waived upon request of the Army.[150]

This program to convert cargo vessels to troopships involved all the basic cargo types. Early in 1943 the Maritime Commission's standard designs (C–1, C–2, C–3, and C–4) were favored, because of their structural suitability and their speed. Altogether about 160 vessels of these types were converted or partially converted for troop service, with capacities ranging from 450 to 3,800.[151] Of this total, 83 were converted by the Maritime Commission during construction and the remainder by the War Shipping Administration and the Army after their delivery as cargo vessels. After the Allied success in North Africa, the less desirable but more readily available Liberty ship was brought into service as a personnel carrier. First, approximately 250 Liberties were fitted in the 'tween decks with temporary bunks for 308 or 504 persons and were used to transport prisoners of war from the Mediterranean to the United States. Later, because of the pressure for the more rapid dispatch of troops to the theaters, temporary but somewhat improved passenger quarters for 350 men were installed in the 'tween decks of 224 of these Liberties, and they were used for the transportation of U.S. soldiers, princi-

[149] Ltr, Admiral E. S. Land WSA for Gen. J. M. Franklin OCT, 13 Sep 43, OCT 564 Army Vessels.

[150] Memo, Commandant USCG for district offices, 21 Sep 43, sub: Military Pool Vessels Conv, OCT HB Water Div Ship Repair and Conv.

[151] List, Geo. A. Anthony, Maintenance and Repair Br OCT, Mar Com C-Type Vessels Converted for Use as Troopships Carrying Army Pers, 12 Aug 48; Final Rpt of Troopship Conv Program, covering period Sep 43–Jan 46, prepared in Maintenance and Repair Br, 30 Jan 46. Both in OCT HB Water Div Ship Repair and Conv.

pally to the Mediterranean.[152] In the spring of 1945, in order to provide additional lift for the redeployment of troops from Europe to the Pacific and for their eventual repatriation, a further conversion program was undertaken, which resulted in 201 Liberties being equipped to carry 550 troops each and 97 Victories being equipped to carry about 1,500 troops each.[153] In this project, also, the work was of a temporary nature and the bunks were removable, but more space was allotted for troop quarters, and the messes, galleys, and hospitals were considerably improved. All the temporary troop quarters on the Liberties and Victories were installed by the War Shipping Administration. During the war 33 Liberties were converted to carry as many as 1,600 troops on the shorter routes, that is, to Alaska and Hawaii and in the Caribbean.[154]

While the troop lift was being thus increased, requirements arose for numerous specialized types of ships. Sixteen passenger and eight cargo vessels were converted into hospital ships to be operated by the Transportation Corps, and work on two additional hospital ships was begun. Six cargo ships were converted into aircraft repair ships, to be operated by the Army Air Forces in forward areas where there were not adequate shore facilities for servicing damaged aircraft. Ten cargo ships were converted into engineer port repair ships, to be utilized by the Corps of Engineers in rehabilitating devastated port facilities overseas. Six cargo ships were converted into marine repair ships, to be operated by the Transportation Corps in the Pacific where there were not sufficient shore facilities for the repair of floating equipment. Seven cargo vessels were converted to spare parts depot ships—three to be utilized by the Ordnance Department, two by the Transportation Corps, one by the Corps of Engineers, and one jointly by the Chemical Warfare Service, the Signal Corps, and the Medical Corps—which were to facilitate the maintenance of military equipment in oversea areas. One cargo ship was converted into a news transmission ship, to be utilized in connection with the invasion of Japan. In addition to the above ocean-going vessels, numerous smaller boats and barges were converted to provide floating refrigeration facilities, floating warehouses, floating maintenance shops, and training vessels for oversea use.[155]

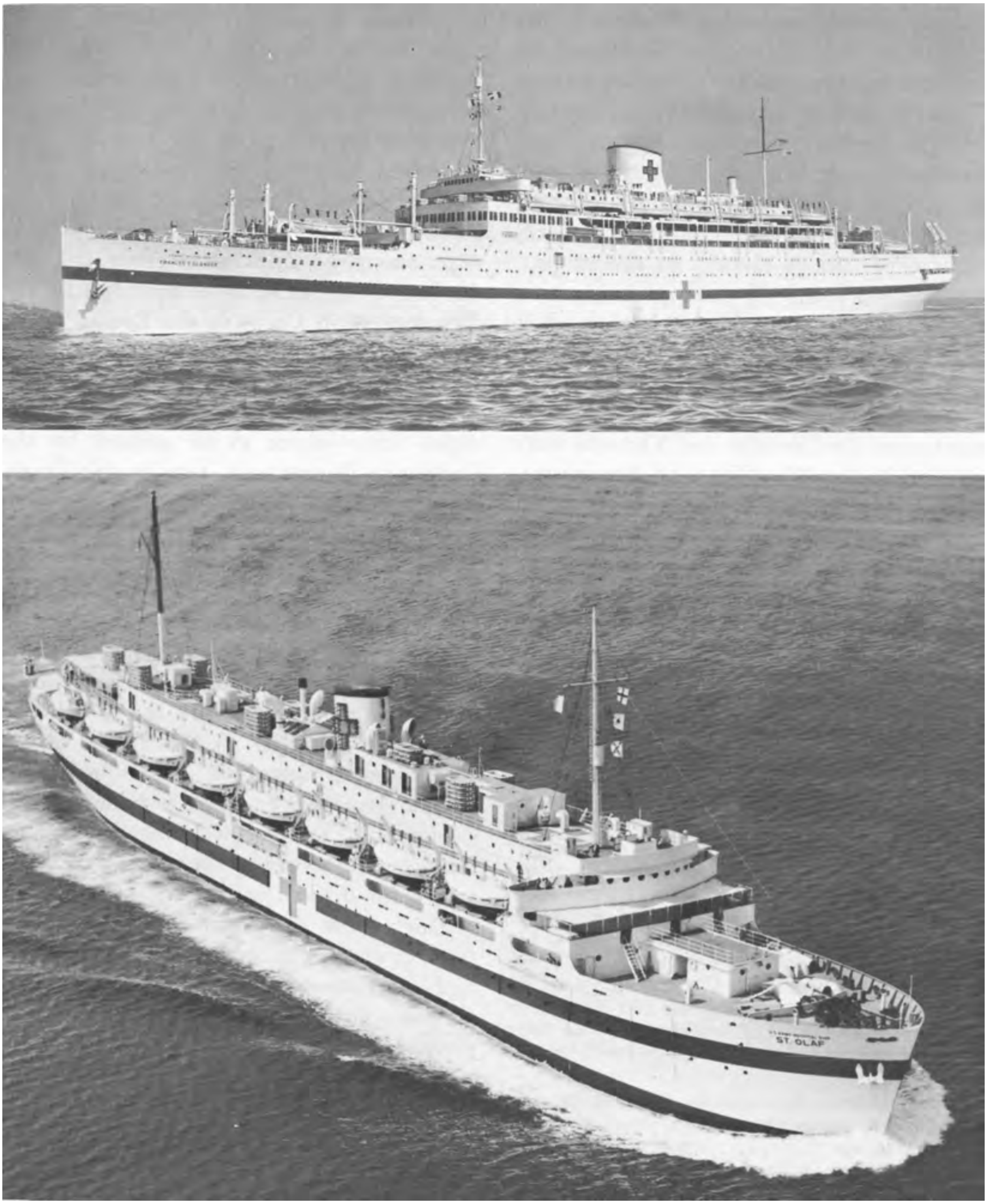
During the early part of the war, the ports of embarkation, acting under the general supervision of the Office of the Chief of Transportation, carried the chief responsibility for conversions in which the Army was interested. The staff of the superintendent of the Army Transport Service (later

[152] The number of Liberties converted for troops and PW's has been variously stated but above figures prepared in Maintenance and Repair Br OCT after V-J Day are considered reliable. See Memo, Geo. A. Anthony, 6 Nov 45, OCT HB Water Div Ship Repair and Conv; also, Roland W. Charles, *Troopships of World War II* (Washington 1947), pp. 358–60. The temporary bunks were removable so that 'tween-deck spaces could be used for cargo.

[153] The Liberties converted for this program were selected from among those previously converted to carry 350 troops.

[154] Charles, *Troopships of World War II*, p. 355. A more extensive program of similar conversions was considered but was not carried out because of the slowness of the Liberties. JMT 9, par. 7 (a) (1), 12 Nov 42; JMTC 26th Meeting, Sec. 2, 21 Jan 43; Ltr, Secy JCS to Chm WPB, 16 Feb 43, OCT 564 Cargo Vessels.

[155] Annual Rpt Water Div OCT FY 1945, OCT HB Water Div Rpts; Memo, Maintenance and Repair Br Water Div OCT for Hist Unit OCT, 14 Jun 45; List, Status of Hospital Ships, prepared in Water Div, 3 Jul 45; Comment 2, G. A. Anthony to C. C. Wardlow, 22 Sep 48. Last three in OCT HB Water Div Ship Repair and Conv.



ARMY HOSPITAL SHIPS. *The* Frances Y. Slanger *(top), a former Italian passenger liner, and the* St. Olaf *(bottom), a Liberty ship, were converted by the Transportation Corps and operated under The Hague Convention.*

Water Division) at each port surveyed the vessels to be converted in his area, recommended the alterations to be made, prepared detailed arrangement plans and specifications, determined what work could be accomplished at the Army's marine repair shops, let contracts for Army transports to be altered at commercial yards, inspected and supervised the work during progress, and controlled the expenses involved.[156]

The several ports functioned entirely independently in these matters until September 1943, when, in order to utilize to best advantage the services of his more experienced officers and to provide greater continuity in the work, the Chief of Transportation divided the seaboard into four sectors and placed each sector under the jurisdiction of a single port commander.[157] In accordance with this plan, Col. John H. Holder of the New York Port of Embarkation was designated to supervise all conversion work performed on the Atlantic coast north of Cape Hatteras; Col. Duval C. Watkins of the New Orleans Port of Embarkation was designated to supervise all work performed south of Cape Hatteras and on the Gulf; Lt. Col. John H. Reilly of the San Francisco Port of Embarkation was designated to supervise all work performed in the San Francisco area and southern California; and Lt. Col. John A. Barthrop of the Seattle Port of Embarkation was designated to supervise all work performed on the north Pacific coast. The other ports and subports continued to make inspections and otherwise assist in supervising conversions accomplished in their respective areas.

In addition to this regional supervision, the Chief of Transportation undertook a more active supervision of the conversion work as the war progressed. In June 1943, when a master ship repair contract was adopted jointly by the Army, the Navy, and WSA, he established an Army War Ship Repair Contract Agency in New York to let and administer all contracts to which the Army was a party.[158] The agency placed virtually all ship conversion orders for the Army until near the end of the war, when, in view of the fact that the pressure on the east coast yards had eased somewhat, the Army ports of embarkation were authorized to negotiate lump sum contracts whenever that method was considered the more economical.[159] In January 1944 the Chief of Transportation set up a Ship Conversion Unit in New York to control certain technical aspects of the work.[160] The new unit was charged with supervision of the drawing of all plans and layouts for troop transports and hospital ships, co-ordination with the War Shipping Administration and the Maritime Commission in connection with their conversion of ships for Army use, survey of ships to be converted on the east coast, inspection of conversion work on such ships and preparation of progress reports. The respective Army ports continued to supervise the actual physical work of ship conversion, and they were requested to scrutinize and criticize conversion plans

[156] See Org Manual NYPE, Sec. 12, par. 9, 19 May 43, NYPE Org.

[157] See Ltrs, ACofT to port comdrs, 23 Sep 43, sub: Conv of Vessels, OCT 564 Army Vessels.

[158] ASF Memo S55-15-43, 7 Jun 43, sub: Estab of AWSRCA; Hist rec of AWSRCA, 30 Jun 44. Both in OCT HB Water Div Ship Repair and Conv.

[159] TC Cir 160-5, Supp. 17, 3 Apr 45, sub: Purchasing and Contracting.

[160] TC Cir 5-6, 12 Jan 44; OCT Info Bull 102, 30 Dec 44. Colonel Holder served as chief of this unit during its first year.

in the light of their experience with the transportation of troops.[161]

In the Office of the Chief of Transportation responsibility for ship conversions and repairs rested with the Chief of the Water Division. The extent of his supervision was limited on the one hand by the pressure under which the work had to be accomplished and the necessity of avoiding delays, and on the other hand by the small technical staff which he was able to maintain in view of the personnel ceiling. In July 1944, speaking at a meeting of port representatives, Col. Raymond M. Hicks, Chief of the Water Division, deplored the inadequacy of the control which his office had been able to exercise.[162] To give point to his statement, he cited the fact that sometimes work done at one port had been redone at another simply because of the different ideas held by different individuals regarding requirements. He announced that new regulations were being placed in effect to insure better central supervision.[163] These regulations stipulated that major repairs and alterations to be accomplished by the ports of embarkation would not be started without prior approval by the Chief of Transportation, and that specifications, work orders, and plans would be submitted to his office "on the day they were issued to the contractor." Similar instructions had been in effect previously, but the new regulations made them more emphatic and set up procedures to facilitate their observance. An important new feature was the limitation placed on voyage repairs which the ports could accomplish on their own initiative and the stipulation that when a project included both voyage repairs and major repairs or alterations authority for the entire project would be obtained in advance from the Chief of Transportation.

The Maintenance and Repair Branch of the Water Division dealt with the technical aspects of this work. It prepared general arrangement plans based on Army requirements, from which the Army ports of embarkation, the Ship Conversion Unit, the Maritime Commission, and the War Shipping Administration developed their more detailed plans and specifications. It reviewed the detailed arrangement plans and the specifications for work to be performed under Army contracts to the extent that this could be done without delaying the work, and also reviewed the charges incurred. It negotiated with the Maritime Commission and WSA regarding the plans for conversion work to be accomplished by those agencies on vessels intended for Army use.[164] Occasionally it sent inspectors to the repair yards to check important aspects of work in progress. From periodical reports prepared by the ports of embarkation, the Ship Conversion Unit, the Maritime Commission, and WSA, it followed the progress of each job in order to determine whether completion schedules were being maintained, and, if not, what action might be taken. It prepared a "Weekly Report Showing Status of Conversion and Repairs of

[161] See Memo, NYPE for CofT, 20 Oct 43, sub: Survey of C-3 Plans, OCT 564 Troopships 1943-45; Memo, NYPE for CofT, 18 Apr 45, sub: Victory Ships, OCT 000-900 Tr Transports.

[162] Proceedings, Mtg of Supts of Water Divs, p. 6, Chicago, 7 Jul 44, OCT HB Water Div Gen.

[163] Consolidated in TC Pamphlet 34, 1 Apr 45.

[164] Ltr, WSA to OCT, 1 Oct 43, sub: C-1B Convs, OCT HB Water Div Ship Repair and Conv; Ltr, WSA to OCT, 14 Oct 43, OCT 564 Army Vessels; Ltr, C of Water Div OCT to WSA, 21 Oct 43, OCT 564 Army Vessels (EC-2 Type); Memo, Col J. H. Holder for Gen J. M. Franklin, 8 Dec 43, OCT 564 Army Vessels (C-4 Type); Ltr, Mar Com to Gen Franklin, 28 Jan 44, OCT 564 Army Vessels (AK type).

Army Scheduled Transports, etc.," which included the jobs that were being accomplished or were scheduled for accomplishment by both the Army and WSA.[165] From October 1942 until the spring of 1946 the Maintenance and Repair Branch was in charge of Col. Otey Y. Warren. The chief naval architect was Mr. George A. Anthony, who had served the War Department in that capacity during the period 1898–1918, and again from 1935 onward.

During the first year of the war, when the problem was to convert the older passenger and cargo vessels to troop carriers, no standard arrangement plans were possible because of the vessels' dissimilarity, but the Transportation Corps formulated standards to govern the installation of the various facilities.[166] When the program was initiated for converting certain types of new cargo ships to troop carriers, it became possible to prepare standard plans for each type. Since the Navy required certain features which the Army did not, especially in crew accommodations and operating officers' quarters, vessels converted to Army standards required additional alterations when reallocated to the Navy, a process which usually involved loss of time.[167] During the summer of 1944 an effort was made to correct this situation by the adoption of standards acceptable to both services. General Gross agreed to the addition of certain Navy features to the standard plans, but, since he considered them desirable rather than essential, he requested that the installation of such features on ships already in service be delayed until the vessels had to be laid up for necessary repairs, thus avoiding needless interruption of their service.[168]

In September 1943 Mr. James F. Byrnes, Director of War Mobilization, expressed concern regarding the slow progress thus far made with the heavy troopship and hospital ship conversion programs which had been launched earlier that year and attributed the delay to the inability of the Chief of Transportation to supply the necessary plans and specifications. While admitting that the task had been a heavy one, because of the many types of vessels nominated for conversion, the Army denied that lack of plans had been the cause of delay in more than a few instances.[169] There were, on the other hand, serious bottlenecks in the procurement of raw materials and the manufacture of important items of equipment, such as blowers, evaporators, and generators. The Army urged the Director of War Mobilization to bend every effort to have these causes of delay eliminated.

Mr. Byrnes apparently felt that his criticism had not received the careful consideration which it deserved, for he soon presented additional facts to support his contention that the conversion programs had been "slow and expensive." The Secretary of War in reply stated that in view of the

[165] Rpt of 10 Jul 44, in OCT HB Water Div Ship Repair and Conv, is typical.

[166] Memo, Maj R. D. Meyer for Col Wylie, 5 Jul 42, sub: Conv Standards, OCT HB Meyer Staybacks.

[167] Memo, CG ASF for USW, 21 Sep 43, OCT 161 Fed Shipbuilding Co; Contl Div ASF, Report to the Secretary of War on Common Activities of the Army and Navy, 12 Dec 45, p. 66, AG A49–212, RG 114.

[168] Conf at Fort Mason, 13 May 44; Memo, SFPE for OCT, 18 Jun 44; Memo, Gross for Somervell, 23 Jun 44; Memo, Somervell for Admiral Horne, 24 Jun 44; Ltr, ACofT for WSA, 24 Jul 44. All in OCT 564 Troopships 1943–45.

[169] Ltr, Byrnes to SW, 11 Sep 43, OCT 564 Troopships 1943–45; Ltr, SW to Byrnes, 27 Sep 43, OCS 570. Concerning delays in early months of war due to lack of plans and specifications for converting vessels, see Memo, Col Hicks for Maj Cooper, 13 Sep 45, sub: Lessons Learned, OCT HB Water Div Ship Repair and Conv.

criticism offered he had caused a complete survey of the troopship and hospital ship conversion programs to be made. He reported that the Chief of Transportation's Maintenance and Repair Branch thus far had prepared plans for converting 95 cargo vessels to troopships, with a total capacity of over 166,000; that some of the conversions had been made wholly by the marine repair shops at Army ports of embarkation and that those accomplished at private repair yards had been supervised by the Transportation Corps; that concurrently the Transportation Corps had drawn plans for and supervised the reconditioning of more than 60 other ocean-going vessels, as well as many interisland and harbor craft.[170] The Secretary of War contended that this record compared favorably with the results achieved by other agencies.

Following this exchange of letters the Director of War Mobilization appointed a committee, consisting of representatives of his own office, the Transportation Corps, and the War Shipping Administration, to expedite the conversion program. His plan contemplated that the committee would engage the services of an experienced firm of naval architects, at WSA expense, for the purpose of speeding up the adaptation of designs and specifications for troop and hospital ship conversions; also that the committee would freeze designs, including those for vessels already undergoing conversion, so that changes would be reduced to a minimum. Mr. Byrnes further proposed that the Transportation Corps and the War Shipping Administration should exchange scarce items of equipment in order to expedite conversions. The Secretary of War, after obtaining the opinion of the Chief of Transportation, expressed his satisfaction with this arrangement.[171] There is no evidence, however, that the committee took specific action along the lines indicated.[172] The preparation of designs and specifications, as the War Department had stated, already was well advanced. The stabilization of designs was a matter which depended largely on Army-Navy co-ordination. The exchange of scarce equipment and materials was a natural feature of the close co-operation which the Transportation Corps and the War Shipping Administration maintained throughout the conversion program.[173]

The supply of critical materials and equipment continued to be a problem till the end of the war.[174] Early in 1943, shortly after the establishment of the Controlled Materials Plan, the War Production Board designated the Maritime Commission to act as claimant agent on behalf of the Army, the Navy, and the War Shipping Administration for all controlled materials required for ship repair and conversion work in private yards.[175] The WSA Coordinator of Ship Repair and Conversion, working through the Maritime Commission, was responsible for maintaining a suitable inventory of controlled materials and also of Class

[170] Ltr, Byrnes to SW, 3 Nov 43, OCS 570; Ltr, SW to Byrnes, 23 Nov 43, OCT 564 Army Vessels.

[171] Ltr, Byrnes to SW, 27 Nov 43; Ltr, SW to Byrnes, 13 Dec 43. Both in OCS 570.

[172] See Ltr, R. M. Hicks to C. C. Wardlow, 4 Aug 48, OCT HB Water Div Ship Repair and Conv.

[173] An exchange arrangement was in effect also with the Navy. See Memo, CofT for CG NYPE, 1 Jul 43, sub: Transfer of Conv Equip, OCT 564 Cargo Vessels.

[174] Memo, C of Water Div for Dir of Supply OCT, 7 Jun 45, OCT HB Water Div Ship Repair and Conv.

[175] Memo, F. Eberstadt to USW, 14 Jan 43, OCT 564 Army Vessels; Memo, Water Div for CMP Div OCT, 20 Jan 43; Memo, ACofT for Supply for CofT, 18 Feb 43. Last two in OCT 564 Jul 42–Dec 43.

A products which were manufactured from controlled materials. This arrangement avoided the necessity of each contractor maintaining an inventory of all materials and equipment likely to be required. Other supplies were procured by the contractors, except in unusual cases where it was advantageous for the government to furnish them.[176] All uncontrolled supplies required by Army marine repair shops, as well as those supplied to private contractors by the Transportation Corps, were requisitioned by the Army ports of embarkation on the basis of six-month estimates.[177] When such requisitions had been approved by the Water Division, the supplies were purchased by the Chief of Transportation's Procurement Division. The ports, however, had authority to make emergency purchases.

The passenger facilities on vessels converted for wartime and repatriation services were not suitable for peacetime Army use. In order to be ready for the postwar task of supporting the U.S. forces in the occupied areas and at other oversea bases, the Chief of Transportation began late in 1945 to crystallize plans for the creation of a permanent fleet of Army transports.[178] These preparations took into account the fact that the War Shipping Administration soon would cease to exist and that the Army thereafter would be unable to draw upon that source for vessels to meet its requirements. The Army's proposal, put forward in February 1946, was that the Maritime Commission transfer to it a total of 91 ocean-going vessels, including 46 troopships which it would convert to peacetime standards.[179] The plan for a permanent Army transport fleet subsequently underwent considerable modification, but that is a development outside the scope of this wartime history.[180]

176 Memos, Water Div for CG NYPE, 9 Aug 43 and 11 Apr 45, OCT HB Water Div Ship Repair and Conv.

177 Memo, OCT for NYPE, 16 Jul 43, OCT HB Water Div Ship Repair and Conv.

178 Memo, ACofT for CG ASF, 29 Dec 45, sub: WD Postwar Plans re Merchant Type Mil Auxiliary Ship; Memo, Gen Wylie for Col Elliott, 20 Jan 46. Both in OCT HB Water Div Postwar Fleet.

179 Ltr, SW to Chm Mar Com, 18 Feb 46, OCT 561.1 Army Vessels; Ltr, Chm Mar Com to SW, 7 May 46, OCT 561.22 Army Vessels.

180 For review of postwar troopship conversion see Statement, Charles E. Hoch, 27 Feb 47, OCT HB Water Div Postwar Fleet.

CHAPTER IX

Utilization of Domestic Commercial Carriers

The traditional policy of the Army was to rely on the commercial carriers for transportation in the zone of interior rather than to establish an extensive inland transportation system of its own, and this practice was maintained during World War II.[1] Such a policy necessitated the Army's developing extensive working arrangements with the carriers and maintaining close relationships with the several governmental agencies which were established to regulate domestic transportation in the national interest.

Certain digressions from this policy, which were made on military grounds or for the relief of the commercial carriers, are to be noted. Utility railroads had been operated by the Army at many of its installations in peacetime because on-post traffic could be handled more economically in this manner than by contracting with commercial carriers, and the practice was continued and naturally extended during the war. Since most of the tank cars in the country were owned by concerns other than common carriers, the Army maintained a tank car fleet of its own in peacetime and expanded it with the coming of hostilities. Specialized hospital cars were built and placed in service by the Army during the war to insure proper care of the seriously ill while they were being moved from ports to hospitals or between hospitals. When commercial bus operators found it impossible to maintain adequate services for the transportation of passengers in the vicinity of certain military installations and war industries, the Army provided vehicles for operation on such routes.

Notwithstanding these direct Army operations, the great bulk of military traffic was transported by the commercial railway, highway, and inland waterway operators. Since the Army was so largely dependent on the commercial carriers for the movement of its personnel and matériel, the Chief of Transportation considered it his responsibility not only to work out effective traffic arrangements with them but also to help them deal with difficulties encountered in the maintenance of services adequate to lift the heavy wartime traffic load—difficulties resulting mainly from shortages of manpower and equipment.

Distribution and Control of Inland Traffic

Considerable change had taken place in the domestic transportation industry of the United States between the first and second World Wars. The railroads, which had carried almost the entire load in the earlier conflict, still handled the bulk of the traffic,

[1] Statement, Chm Trans Advisory Gp OQMG, Annual Mtg of Chamber of Commerce of the U.S., Washington, Apr 41; WD Memo 55–130–2, 22 Oct 46, par. 1.

TABLE 9—PERCENT DISTRIBUTION OF INTERCITY PASSENGER AND FREIGHT TRAFFIC IN THE UNITED STATES, BY TYPE OF CARRIER: 1940–1945.

Type of Carrier	1940	1941	1942	1943	1944	1945
Passenger (Passenger-Miles)..	100.0	100.0	100.0	100.0	100.0	100.0
Railroads [a]	8.7	9.8	19.7	33.6	34.9	30.6
Motor Buses	90.4	89.2	7.7	10.2	9.5	8.8
Private Automobiles			71.4	54.9	54.0	58.8
Inland Waterways [b]	0.5	0.6	0.7	0.7	0.8	0.7
Airways [c]	0.4	0.4	0.5	0.6	0.8	1.1
Freight (Ton-Miles)	100.0	100.0	100.0	100.0	100.0	100.0
Railroads [a]	61.3	63.6	70.2	72.0	69.2	68.2
Motor Trucks	7.9	7.5	5.5	4.7	4.6	5.6
Inland Waterways [b]	19.1	18.6	16.2	13.9	13.9	14.1
Pipe Lines—Oil [d]	11.7	10.3	8.1	9.4	12.3	12.1
Airways [c]	e	e	e	e	e	e

[a] Steam and electric railways. Freight figures include express and mail.

[b] Includes traffic on rivers, canals, Great Lakes, and coastal barge routes, but not coastwise or intercoastal ocean routes.

[c] Includes certificated air carriers.

[d] Does not include gas pipelines.

[e] Estimated as 0.01 percent of total in 1944 and 1945, and less than 0.01 percent in earlier years; including express and mail.

Source: ICC *Annual Reports.*

but great progress had been made in transportation by highway, waterway, pipeline, and air. This wider distribution of traffic provided a certain amount of insurance against a repetition of the grave difficulties in the movement of military supplies which had been encountered in 1917–18 because of congestion on the railroads.[2]

A further redistribution of traffic took place during World War II as the result of wartime conditions. The rationing of gasoline and tires and the scarcity of replacement parts necessitated the withdrawal from service of many private automobiles and restricted the use of others, forcing upon the common carriers the traffic which those vehicles had handled. The withdrawal of ships from intercoastal and coastwise services, because they were more urgently needed on the transoceanic routes and because of the heavy losses inflicted by submarines operating off our Atlantic and Gulf coasts, meant that most of the domestic traffic previously moved by such vessels had to be taken over by the railroads, the highway carriers, the barge lines, and the pipelines. The influence of these conditions on the percentages of the total traffic handled by the several types of transport may be seen in Table 9. The wartime growth of the traffic in the respective transportation fields is shown in Table 10. Although both compilations involve a certain amount of

[2] Interstate Commerce Commission, *56th Annual Report* (Washington, November 1, 1942), pp. 1, 2; ICC, *57th Annual Report*, pp. 2–5.

TABLE 10—INDEXES OF PASSENGER AND FREIGHT TRAFFIC IN THE UNITED STATES: 1940–1945

(1935–39 average = 100)

Type of Carrier	1940	1941	1942	1943	1944	1945
Passenger (Passenger-Miles [a])						
Railroads [b]	108	133	244	400	434	419
Intercity Motor [c]	110	143	214	279	292	292
Local Transit [d]	102	111	140	172	179	181
Air [e]	226	294	291	324	445	691
Freight (Ton-Miles)						
Railroads [b]	115	146	194	219	222	206
Intercity Motor [f]	130	172	190	210	210	206
Water-borne [g]	121	124	75	67	68	77
Pipe Line [h]	117	130	149	189	252	255
Air [e]	156	205	353	577	786	1016

[a] Based on passenger-miles except for local transit which is based on number of passengers.
[b] Class I steam railroads.
[c] Public intercity motorbus lines.
[d] Public motor and electric local transit lines.
[e] Certificated air carriers, including express and mail.
[f] Class I motor common and contract carriers of property.
[g] Inland waterways, Great Lakes, coastal and intercoastal domestic ocean routes.
[h] Crude and refined petroleum and natural gas.

Source: Office of Business Economics, U.S. Department of Commerce. For method of computing indexes see *Survey of Current Business*, February 1946, p. 21.

estimation and their bases are not entirely comparable, each within itself is indicative of the changes which the war brought about.

Because of the limitation on the expansion of transportation plant and equipment, increased carrying capacity had to be achieved largely by improved efficiency in the use of existing facilities. One means to that end was greater co-ordination in the operations of the transportation industry and the elimination of wasteful competition and useless duplication of services. Early in the war arrangements were made with the Department of Justice for the postponement of actions against the carriers under the antitrust laws, on certification that the prosecution of such actions would interfere with the wartime transportation job.[3] There were substantial accomplishments in the direction of co-ordination within the several

[3] Joseph B. Eastman, *Selected Papers and Addresses, 1942–1944* (New York, 1948), pp. 35, 156; *Civilian War Transport, a Record of the Control of Domestic Traffic Operations by the Office of Defense Transportation, 1941–1946* (Washington, 1948), pp. 122–23; Memo, Gen Gross for Mr. Julius H. Amberg Sp Asst to SW, 3 Apr 44, sub: Antitrust Suit Against RR's Parties to Western Agreement, OCT 013.3 Antitrust Prosecution; Ltr, Dir ODT to Dir OWM, 10 Aug 44; Ltr, Atty Gen to SW, 18 Oct 44. Last two in OCT HB Gross Rail.

branches of the industry, sometimes on the carriers' own initiative and sometimes in compliance with directives of the Office of Defense Transportation. As regards the industry as a whole, however, little progress toward integration was in evidence, especially as between rail and motor carriers. Although there was considerable discussion of the subject and some specific steps were undertaken by ODT, in general the carriers looked askance at the proposal and no practicable and acceptable plan for extensive integration could be placed in effect.[4]

Early in the war the possibility of having to restrict nonessential traffic through some form of priority was discussed. The Director of Defense Transportation, whose function it was to impose restrictions when necessary, desired to avoid such action insofar as possible.[5] Generally speaking, he was successful in adhering to that policy. Some of the ODT regulations had the effect of limiting certain types of traffic in the interest of the whole. Strong appeals were made to the public to travel and ship only when necessary. Special trains for conventions, sporting events, and resort travel were ruled out. The generally accepted doctrine that traffic essential to the armed services and the war industries must not be delayed indirectly limited the amount of transportation equipment available for other purposes and had the effect of making nonmilitary travel less comfortable and nonmilitary freight movements less expeditious. But so far as inland surface transportation was concerned, no system of priorities was imposed and the public was free to use the services which the common carriers offered.[6]

In preparation for a somewhat detailed discussion of the Army's utilization of domestic carriers it is helpful to note the distribution of Army traffic among the several types of surface transportation. The bulk of it was handled by the railroads, although increased and substantial use of the highways and the inland waterways was made as the war progressed. During the 45-month period, December 1941–August 1945, the freight tonnage moving on War Department bills of lading was distributed 90.5 percent to the railways, 8.2 percent to the highway carriers, and 1.3 percent to the inland waterways.[7] Equally complete data for Army passenger traffic are not available, but during the same period passengers traveling in groups of 40 or more, all of which were routed by the Office of the Chief of Transportation, were distributed 97.6 percent to the railways and 2.4 percent to the highways.[8] The volume of the Army's passenger and freight traffic on the commercial airlines was relatively so small that it is omitted from this comparison.

[4] Eastman, *Selected Papers*, p. 218; "Rail-Truck Coordination," *Traffic World*, April 3, 1943; "Rail, Trucks to Study Coordination," *Transport Topics*, September 6, 1943; ODT press releases 368, 22 Sep 43, and 376, 1 Oct 43; "Transportation Coordination," *Traffic World*, January 13, 1945.

[5] Eastman, *Selected Papers*, p. 85, address given 9 Jun 42; "ODT is Confident Freight Priorities are Unnecessary," *Journal of Commerce* (New York), October 14, 1943.

[6] Consideration was given to a priority system to reduce nonessential travel but AAR estimated that the requirement of personnel to administer such a system would be prohibitive. See Memo, CG ASF for USW, 8 Feb 44, ASF Hq Trans 1944. The limited aircraft capacity was utilized under strict priorities for both passengers and freight.

[7] Gross final rpt, p. 26.

[8] *Ibid.*, p. 20. If smaller parties and individuals traveling on WD orders were included, it is probable that the percentage moved by highway would be slightly larger.

Basic Relations with the Railroads

The experiences of World War I demonstrated the need for centralized control in wartime transportation and traffic operations. That principle was found to be valid for both the carriers and the Army. In 1917 the railroads had a general organization, the American Railway Association, but it lacked the authority necessary to coordinate fully the operations of the member lines. This fact was in a large measure responsible for the seizure of the railroads by the federal government in December of that year and the establishment of the United States Railroad Administration.[9] So far as the Army was concerned, during the early months of the first world war the control of freight traffic was distributed among the several supply services, which shipped when they were ready and by routes of their own choosing and competed with each other in an effort to move their own supplies with the least possible delay.[10] The confusion, congestion, and shortage of cars which resulted from this decentralization led to the establishment of a division in the General Staff to exercise over-all control of traffic movements. The difficulties resulting from the initial weaknesses in domestic transportation and traffic arrangements, and the dislocations caused by subsequent reorganizations, persisted in a measure to the Armistice.

World War II found the railroads much better organized to cope with emergency conditions. The principal factor in this improvement was the Association of American Railroads, which had been established in 1934 by merging the American Railway Association, the Association of Railway Executives, and several other associations within the industry.[11] The AAR, of which all Class I railroads were members, was established at a time when the carriers were in serious straits because of the general depression and the resulting dearth of traffic; a concerted effort to reduce competitive waste and improve operating efficiency was mandatory.[12] It had broad powers to deal with problems common to the industry, including operations, maintenance, research, and railway economics. Of special importance from the standpoint of military traffic were the powers vested in its Car Service Division. Under a prewar agreement among the railroads, that division had authority to suspend the rules governing the use and distribution of freight cars and to transfer freight equipment from one railroad or territory to another when this became necessary to meet traffic requirements.[13] It had authority to place embargoes on shipments to critical points with a view to preventing or alleviating congestion. In July 1945 the Office of Defense Transportation appointed the chairman of the Car Service Division to act as its agent in controlling the use and distribution of all passenger, baggage, and express cars owned by the railroads, in order to meet the ex-

[9] Crowell and Wilson, *The Road to France*, pp. 113–16.

[10] *Report of the Chief of Staff of the U.S. Army to the Secretary of War, 1919*, pp. 147–67.

[11] *The Association of American Railroads, its Organization and Activities* (Washington, n.d., Library of Congress Card No. A–39–643), p. 1.

[12] Statement by J. J. Pelley, Pres AAR, before Special Master Lloyd K. Garrison representing U.S. Supreme Court in state of Georgia suit against the railroads, 14–15 August 1946.

[13] Association of American Railroads, *American Railroads and the War* (Washington, November 1943), p. 22. The interchangeability of rolling stock between the rail lines was possible because of the general adoption of standard gauge and a large degree of uniformity in equipment.

ceedingly heavy military requirements for such equipment during the repatriation and demobilization period.[14] Although the Car Service Division never had control of equipment owned by the Pullman Company, the two organizations worked in close co-ordination, as will be seen when the mechanics of troop movements are discussed.

The Car Service Division was quick to adapt its machinery to the requirements of war. In November 1939 it designated one of its officials, Mr. George C. Randall, to serve as manager of port traffic, with headquarters at New York, to give specific attention to the maintenance of fluid traffic conditions on the Atlantic seaboard. His functions included the maintenance of records regarding the volume of export traffic and the condition of railway terminals at the ports, and the maintenance of daily contact with the railroads, the steamship lines, the warehouse operators, the port authorities, and the federal government agencies concerned with export traffic, in order to be in a position to initiate whatever measures might be necessary to forestall or reduce an excessive accumulation of loaded cars on port trackage or of export freight in port storage. In October 1941 an assistant manager of port traffic was placed at San Francisco to function in a similar manner with regard to Pacific coast ports.[15] Throughout the war these agencies performed valuable service in the over-all effort to keep the ports free of congestion.

The Car Service Division also collaborated closely with The Quartermaster General, who was responsible for Army transportation during the period of preparatory arming, to improve the machinery for handling military traffic. Since World War I the railroads had maintained a troop movement bureau in the Office of the Quartermaster General.[16] During peacetime that bureau had been operated on a very modest scale, but early in 1940 plans were initiated to extend its scope to cover both freight and troop traffic and to provide explicit rules of procedure. In June 1940 an Outline of Relations Between Representatives of the Rail Carriers of the United States and the Military Authorities was agreed on, which included provision for the establishment of a Military Transportation Section by the Car Service Division, with headquarters in the Office of the Quartermaster General.[17] The basic purpose of the new section was to assist The Quartermaster General in arranging for and controlling the movement of troops and supplies and to place representatives in the field to act as liaison between the local military authorities and the carriers. The Military Transportation Section began functioning on 1 August 1940, with Mr. Arthur H. Gass as manager.[18] AAR instructed its district managers to respect the instructions of MTS and informed the operating officers and committees of the member lines regarding the new agency's activities. Thus was established, sixteen months before the United States entered the war, the machinery for close co-operation between the railroads and the

[14] *Civilian War Transport*, p. 83; ODT GO 55, 17 Jul 45.

[15] AAR press releases, 7 Nov 39 and 31 Oct 41, OCT HB Topic RR AAR Port Traf Mgr.

[16] Crowell and Wilson, *The Road to France*, pp. 41–50.

[17] Outline of Relations, promulgated by OQMG, 24 Jun 40, Secs. II–2 and III–2, OCT HB Topic AAR MTS.

[18] AAR press release, 24 Jul 40; AAR, Memos to Dist Mgrs, Interterritorial Mil Com, and Chief Operating Offs, 17 Jul 40, OCT HB Topic RR AAR MTS.

Army which accounted in large measure for the smoothness and promptness with which troops and matériel were moved throughout the period of hostilities.[19]

For the handling of matters relating to railway passenger rates, routing, and scheduling, the railroads were organized into seven territorial passenger associations, which were designated, respectively, New England, Trunk Line, Central, Southern, Southwestern, Western, and Transcontinental. The last three associations acted jointly in regard to military traffic under the name of Western Military Bureau, so that there were in effect five territorial groups. The activities of these groups were co-ordinated through the Interterritorial Military Committee, on which each group was represented. Mr. H. W. Siddall, who served as chairman of the Interterritorial Military Committee, with headquarters in Chicago, was a key figure in the relations between the Army and the railroads pertaining to passenger traffic. He was a signatory to the Outline of Relations referred to above, along with J. J. Pelley, president of the Association of American Railroads, and The Quartermaster General. The Interterritorial Military Committee and each of the five territorial groups placed representatives in the office of the Military Transportation Section to facilitate the arrangement of routings for troop movements. They also had representatives at military camps and other stations where the troop traffic was considerable.

As regards the Army's management of its inland traffic, the principle of centralization which had been developed during World War I was continued in effect. During the peace period and the early months of World War II The Quartermaster General was responsible for the supervision and direction of all matters connected with the transportation of the personnel and property of the Army, including rates, routings, and methods of shipment.[20] The execution of this responsibility was delegated very largely to the Commercial Traffic Branch, Transportation Division, OQMG, whose chief was Capt. (later Col.) Edmund C. R. Lasher.[21] Transportation officers in the field were permitted to route only small parties of passengers and small quantities of freight. During 1940 and 1941, when shipments of Army freight were expanding rapidly, protests were filed by some of the larger installations and some of the supply service headquarters in Washington because they believed that obtaining routings from a central source involved unnecessary delays to shipments.[22] But although wartime conditions necessitated some adjustments in the routing regulations pertaining to both passenger and freight traffic, the principle of centralization was retained, and in some respects extended, under The Quartermaster General and later under the Chief of Transportation.

The co-operative arrangements between the Army and the railroads were tested somewhat during the emergency period in the handling of the increased traffic which resulted from the expansion of the Army, the holding of extensive field maneuvers, and the implementation of the Lend-Lease

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[19] MTS also aided Navy, Marine Corps, and Coast Guard in moving personnel and stores.

[20] AR 30–905, 1 Aug 29, par. 2.

[21] See review of activities of Coml Traf Br, atchd to Memo for C of Trans Div OQMG, 16 Mar 40, OCT HB OQMG Coml Traf Br.

[22] See OCT HB Monograph 6, pp. 117–22.

Act. The real test, however, came during the weeks immediately after the Japanese attack on Pearl Harbor. Our precipitate involvement in a two-ocean war necessitated the immediate movement of a large number of troop units and their impedimenta to coastal points which required additional protection against possible enemy action and to the ports of embarkation for shipment to oversea bases.[23] Hastily made military plans frequently had to be changed, with corresponding changes in transportation arrangements and sometimes changes in the destination of troops and supplies already en route. The situation was complicated further by the decision to divert certain shipments of lend-lease goods which were already at the ports to the use of our own underequipped forces. Although the period was a tumultuous one, requiring day and night service on the part of key officials in the Army transportation organization, the Military Transportation Section, and the territorial passenger associations, and resulting in some mistakes and delays due to haste and lack of experience, the task as a whole was performed in what General Marshall termed an "extremely efficient manner." [24]

An important contribution to railroad operating efficiency was made by the thirteen shippers' regional advisory boards, which had been established in 1923 to aid the railroads in the proper distribution and economical utilization of freight equipment.[25] Among the services performed by these boards, which represented the leading shippers of the respective regions, was the preparation of quarterly forecasts of freight car requirements on the basis of which the Car Service Division could plan in advance for meeting the requirements for particular types of cars in particular areas. Such forecasts were of especially great value after we entered the war, because of the increased volume and changed character of industrial production.

Since the Army, because of its many new manufacturing plants and depots, had become a large shipper, it was evident that if the forecasts were to be reasonably accurate they should include data regarding military car requirements. Beginning in 1941 efforts were made to consummate such an arrangement, but difficulties were encountered because of security considerations.[26] After an extended period of conferences between representatives of the Chief of Transportation and the Army technical services, a plan was evolved in the summer of 1942 under which the technical service depots and manufacturing plants and the commercial plants manufacturing equipment and supplies on Army contracts submitted quarterly forecasts to the Chief of Transportation. His Traffic Control Division consolidated these reports and forwarded them to the Association of American Railroads, where

[23] For example, on 8 Dec 41 arrangements were made with AAR for prompt movement of 13 antiaircraft regiments to east coast stations and 11 to west coast stations. See Memo, CPG (Col C. P. Gross, C of Trans Br G-4) for Col Hodson, 8 Dec 41, OCT HB Gross Day File; Ltr, A. H. Gass to QMG, 15 Dec 41, OCT 511 Rail and Motor Mvmts.

[24] *Biennial Rpt, CofS USA,* 1943, p. 8. General Marshall referred particularly to movement of almost 600,000 troops and their impedimenta during first five weeks of war.

[25] L. M. Betts, "The Shippers' Advisory Board Movement," *The Journal of Business* (Chicago), February 1941.

[26] Draft Memo for record, Capt W. H. Schmidt, Historian for Traf Contl Div OCT, sub: Est of Carloadings, OCT HB Topic RR Car Loading Forecasts, summarizing correspondence in private file (subsequently destroyed), 1941-43.

they in turn were consolidated with the forecasts of the shippers' advisory boards.[27]

The Army's effort to make its car loading forecasts reasonably accurate met with numerous obstacles. Difficulty was experienced in getting forecasts from many commercial plants, and especially in getting them promptly. The forecasts submitted by many of the technical service installations proved to be far over or far under actual requirements.[28] The Traffic Control Division was not permitted to submit detailed information to the Association of American Railroads in regard to certain types of commodities which were under especially strong security control, and this restriction lessened the value of the Army data. Also, it was found impossible to estimate three months in advance the quantity of equipment and supplies that would move from training camps with troop units. Despite the slow progress made in overcoming these difficulties, Brig. Gen. William J. Williamson, Chief of the Traffic Control Division, continued to the end of the war his effort to improve the quality of the forecasts, which he believed served a very useful purpose. The national forecasts of total freight car loading proved to be remarkably close to actual loadings, the variations during the eight quarters of 1943–44 ranging from .02 percent to 6.7 percent. There were wide variations as regards particular districts and particular types of cars, but the AAR nevertheless found the data helpful in its effort to distribute freight equipment to best advantage.[29]

In matters relating to railroad service at its installations the Army elected to negotiate directly with the railroads, rather than through the Association of American Railroads.[30] Such matters included the provision of adequate main-line service and switching service, and the construction and maintenance of access tracks. In 1940 and 1941 the building of new installations to serve the rapidly growing Army brought this subject into prominence. At that time the responsibility for conducting negotiations on behalf of the Army was not clearly defined in the regulations, but the Commercial Traffic Branch undertook such negotiations as part of its general responsibility for transportation arrangements with the carriers. The branch met with considerable difficulty in getting advance information from The Quartermaster General's Construction Division regarding proposed installations, because of the extreme pressure under which that division was working and its desire to avoid delay.[31] The Commercial Traffic Branch desired this information at the earliest possible moment, not only in order to get service commitments from the railroads before the installation sites were chosen and the competitive element thus

[27] Ltr, CofT to AAR, 29 Jun 42, OCT HB Topic RR Car Loading Forecasts; Memo, Col Williamson for Gen Dillon, 27 Sep 42, OCT 504 Quarterly Freight Car Requirements. Concerning forecasts prepared by ODT see *Civilian War Transport*, pp. 87–93.

[28] Memo, CofT for CofCWS, 11 Jan 44, and atchd comparison of estimated with actual car loadings, OCT 531.5 CWS; Memo, CofT for OQMG, 13 Jan 45, OCT 504 WD Car Requirements.

[29] Memo, Williamson to SGO, 19 Sep 45, sub: Car Requirements; Memo within AAR (Stringer for Kelley), 30 Oct 48. Both in OCT HB Topic RR Car Loading Forecasts.

[30] Negotiations usually were with individual carriers, but sometimes with committees representing groups of carriers. Conf, author with Col E. C. R. Lasher, 12 Nov 48, OCT HB Traf Contl Div Misc. Lasher served as Chief of the Commercial Traffic Branch OQMG and also as Deputy Chief of the Traffic Control Division OCT.

[31] On this subject see OCT HB Monograph 6, pp. 354–66; also Conf with Lasher cited n. 30.

removed, but also in order that it might pass on the practicability of the sites from the standpoint of accessibility and adequacy of rail line haul capacity.[32]

Soon after the United States entered the war, responsibility for the construction of installations was transferred from The Quartermaster General to the Chief of Engineers. This action was followed shortly by a War Department directive which specifically assigned to The Quartermaster General the function of negotiating agreements covering the operations of rail carriers to and from military establishments.[33] This function was transferred to the Chief of Transportation when his office was established in March 1942. Although co-ordination between the transportation and construction agencies of the Army was greatly improved thereafter, the difficulty evidently was not entirely overcome, for in November 1942 General Gross found it necessary to request that further instructions be issued to insure that pending plans for new installations, or for the extension of existing installations, should always be referred to him for review.[34] At that time the Chief of Transportation was confronted with a problem which was just becoming troublesome—the approach to capacity operation on some of the important railroads, particularly in the southeastern states. Ill-considered action to locate Army camps or other large installations on certain of these lines had increased their traffic to a point where their ability to carry the even greater load which the future would impose upon them was in doubt.

Since many Army installations were located some distance from the rail lines, the question as to who should pay for the construction and maintenance of the connecting trackage was one of considerable monetary importance. Initially the Association of American Railroads took the position that the government was responsible for all trackage beyond the carriers' right-of-ways. The Army on the other hand contended that the government basically was responsible only for trackage within the military reservations and that trackage between the reservations and the carriers' right-of-ways should be worked out by negotiation between the Army and the individual carriers.[35] This view determined the practice which was followed throughout the war. The result was that in a considerable number of instances where the distance was not great the railroads agreed to install and maintain tracks beyond their right-of-ways at their own expense, in consideration of the traffic expected to accrue to them as a result of the connection.[36] Usually access tracks installed at government expense were constructed and maintained by the Corps of Engineers, but sometimes the Army con-

[32] The Senate Special Committee Investigating the National Defense Program criticized the lack of regard for transportation considerations in locating certain camps. See Rpt, *Camp and Cantonment Investigation* (Washington, August 14, 1941), pp. 32, 35.

[33] WD Cir 28, Sec. V, 30 Jan 42. Such arrangements were subject to concurrence of the Chief of Engineers with respect to construction, maintenance, and repairs. AR 55–105, par. 2i (1) (2), 29 Dec 42.

[34] Memo, CofT for CG SOS, 7 Nov 42; 1st Ind by CofS SOS to CofEngrs, 7 Nov 42; 2d Ind, ACofEngrs for SOS Hq, 6 Dec 42. All in OCT 323.3 Location of WD Installations.

[35] Ltr, C. H. Buford Vice Pres AAR to USW, 9 Apr 41; Ltr, USW to Buford, 19 Apr 41. Both in OCT 617 RR Facilities.

[36] The Army always insisted that the railroads build access tracks at least to the borders of their right-of-ways. 6th Ind, OCofEngrs to Div Engr Pacific Div, 20 Sep 43, CE 161 (W869 Eng 8665); Ltr, C of Traf Contl Div OCT to Vice Pres Boston and Maine RR, 2 Apr 44, OCT HB Topic RR Access Tracks and Switching.

tracted with the connecting railroads for their construction or maintenance, or both.

The situation with regard to switching charges differed as between passenger and freight traffic. Passenger fares committed the carriers to provide transportation only between their own terminals, and the switching of troop cars into and out of Army installations therefore was at government expense.[37] Freight rates, on the other hand, included switching to and from the sidings of the shippers or consignees, if they were within the recognized switching limits. When installations were established outside the switching limits, the Army endeavored to have the limits extended if that could be done equitably.[38] Otherwise it was arranged that the railroad would switch without extra charge to an agreed interchange point, which might be on its own right-of-way, on the military reservation, or along the access track, according to local circumstances.

Negotiations with the railroads regarding services at installations and access tracks were conducted informally by the Traffic Control Division on behalf of the Chief of Transportation. Clauses relating to these matters were included in formal contracts which the Corps of Engineers made with the railroads regarding real estate and the construction and maintenance of tracks and other facilities. Such contracts were submitted to the Chief of Transportation for concurrence before being executed for the Army. They then were checked against the commitments which the Traffic Control Division had obtained, or in the absence of commitments, with the Division's policies regarding such matters.[39]

The indispensability of the railroads to the functioning of the military establishment and their vulnerability to sabotage made the protection of critical structures such as bridges and tunnels a matter of high importance. At a meeting of the commanders of the service commands held in December 1942, the opinion was expressed that sufficient protection was not being provided and that the railroads should do more in that direction. The Association of American Railroads took the position that the staff of over 12,000 guards already supplied by the carriers fulfilled their obligation and that they should be exempt from additional requirements. The Chief of Transportation, however, insisted that the protection of railway property was solely a responsibility of the carriers and that in view of the added revenue which the railroads derived from military traffic this responsibility was not an undue hardship.[40]

In matters of policy, such as those affecting the expansion of railroad facilities, the meeting of the railroads' manpower requirements, the training of troops for the Military Railway Service, the protection of critical railroad structures from sabotage, the prevention of congestion at important inland gateways and ports, and the operation of the railroads in case of strikes, negotia-

[37] This paragraph based on conf with Lasher cited n. 30.

[38] See 2d Ind, CofT for CofEngrs, 3 Dec 43, OCT 601.53 Framingham Mass Gen Hospital; Ltr, Traf Contl Div OCT to Ga. and Fla. RR, 30 Apr 43, OCT 508 Moody Field; 3d Ind, CofT for CofEngrs, 25 Oct 43, OCT 161 AT&SF RR (W957 Eng 1879); Memo, CofT for CofEngrs, 11 May 43, sub: Contract—Texas and New Orleans RR Co, OCT 161 T&NO RR Co.

[39] Memo, CofEngrs for CofT, 4 Jun 42, sub: Negotiation of Contracts; 1st Ind, CofT for CofEngrs, 29 Jun 42. Both in OCT 617 RR Facilities.

[40] Ltr, CG SOS to Pres AAR, 21 Dec 42, OCT HB Gross Rail; Ltr, Pres AAR to CG SOS, 24 Dec 42; Ltr, CofT to Pres AAR, 6 Jan 43. Last two in OCT 080 AAR 1942.

tions with executives of the Association of American Railroads were usually conducted by the Chief of Transportation or his principal assistants. General Gross considered such matters to be of primary importance and gave them his personal attention when the circumstances warranted. General Somervell occasionally took a hand when negotiations of special significance were under way. In the day-to-day handling of traffic and operating matters, the Traffic Control Division and the Rail Division of the Office of the Chief of Transportation dealt directly with the Car Service Division and its various agencies.

Although the Chief of Transportation kept the power of decision regarding railroad matters well centralized in his own office, his field organization, notably the zone and district transportation officers, maintained close contact with the carriers in their respective localities. They reported to the Chief of Transportation any conditions or developments which might affect Army traffic, and frequently matters were referred to them by headquarters for investigation and recommendation. Among the matters receiving their particular attention were the need for increased trackage and other facilities, proposals to abandon little-used trackage in order that the materials might be used more advantageously elsewhere, the rerouting of traffic to avoid or relieve congestion at heavily used points, the prompt unloading and release of cars by consignees, and manpower shortages which affected or were likely to affect the carriers' ability to render adequate service. While the principal responsibility of these field officers was to study local conditions, recommend action to the Chief of Transportation, and act on his behalf when so instructed, they had authority to co-operate with local railroad officials in meeting emergency conditions without his prior approval.[41]

Wartime Expansion of Railroad Traffic

Two months after the outbreak of war in Europe, the Interstate Commerce Commission noted that as a result of this warfare there already was a tendency toward increased traffic on the domestic carriers of the United States.[42] From that point onward the expansion gathered momentum rapidly. The amendment to the Neutrality Act, approved 4 November 1939, which permitted belligerents to procure munitions in the United States on a "cash and carry" basis, was followed by the placing of large British and French orders with American industries.[43] The President's declaration of a full emergency and the stepping up of the American rearmament program, following the German successes in Europe during the spring and early summer of 1940, added to the production program and hence to the transportation requirements for moving raw and finished materials. The federalization of the National Guard and the passage of the Selective Service Act in September 1940, together with the consummation in the same month of an agreement with the British under which the United States acquired new bases in the Atlantic, foreshadowed heavy increases in both the passenger and the freight traffic of the Army.[44] The Lend-Lease Act of March 1941 forecast a still further increase in the volume of production and the domestic

[41] Zone and District Transportation Officers' Guide, Nov 43, par. 100.4, OCT HB TZ Gen.

[42] ICC, *53d Annual Report,* November 1, 1939, p. 20.

[43] Edward R. Stettinius, Jr., *Lend-Lease: Weapon for Victory* (New York, 1944), Ch. II.

[44] See OCT HB Monograph 6, pp. 55–66.

transportation load. The expanding industrial activity called for more business travel, and the accompanying increase in earnings stimulated travel for pleasure and the demand for consumer goods.

During this early period, spokesmen for the Association of American Railroads expressed confidence that the carriers could cope successfully with any demands that might be made on them.[45] Such opinions were predicated on two conditions: cooperation of shippers in utilizing railroad equipment economically, and effective control of traffic movement to avoid port congestion such as had been experienced in World War I. The confidence which AAR felt stemmed from the fact that the railroads were better organized than in 1917, individually and as an industry, and that railroad equipment, while less when measured by number of units, was larger, more efficient, and capable of performing much more work. Expressions of optimism were heard even after we entered the war.[46] It soon became apparent, however, that with the rapid increase in traffic, the limitation on the production of new equipment, and the shortage of labor, the carriers had a difficult time ahead of them.

There are several methods of measuring the growth of traffic during the war period, but the most accurate is by comparison of total revenue miles of freight and passenger transportation accomplished.[47] The following data afford a basis for comparing the railroads' freight traffic in 1944, which was the peak year, with that in 1929, which produced the greatest ton-mileage prior to World War II, and that in 1938, the year just preceding the outbreak of hostilities in Europe:

[45] Address, C. H. Buford Vice Pres AAR at annual dinner of Medical and Surgical Section, New York, 10 Jun 40; Addresses by M. J. Gormley Exec Asst AAR before Northwest Shippers' Advisory Bd, Duluth, 25 Jul 40, and American Warehousemen's Assn, Chicago, 12 Feb 41. All in OCT HB Topic RR Gen Info.

[46] Address by Gormley before Great Lakes Shippers' Advisory Board, Toledo, 16 Sep 42, OCT HB Topic RR Gen Info.

[47] Data in this paragraph based on Association of American Railroads, *Railroads in This Century*, (Washington, July 1947), pp. 13, 16.

Year	*Revenue Tons Originated*	*Ton-Miles Accomplished*	*Average Miles per Ton*
1929	1,419,383,000	450,189,394,000	317.2
1938	819,733,000	291,866,410,000	356.1
1944	1,564,780,000	740,586,092,000	473.3

Corresponding data are given below regarding passenger traffic on the railroads during 1944, the peak war year, 1920 which was the peak year before World War II, and 1938:

Year	*Revenue Passengers Carried*	*Passenger-Miles Accomplished*	*Average Miles per Passenger*
1920	1,269,913,000	47,369,906,000	37.3
1938	454,508,000	21,656,918,000	47.6
1944	915,817,000	95,662,501,000	104.5

It is to be noted that, while the average freight haul represents the distance from origin to destination, under the railroads' method of computation the average passenger haul represents the distance traveled on each rail line and several such hauls may have resulted from one continuous trip. This fact, and the inclusion of commuter traffic, account for the short average passenger haul compared with the average freight haul.

The marked wartime increase in the average length of haul for both passengers and freight may be attributed to the fact that new industrial plants and military camps and depots were widely distributed throughout the country, and to the heavy shipments of military personnel and supplies from many points of origin to Atlantic, Gulf, and Pacific ports for movement overseas. These circumstances also account for the average Army haul being greater than the general average.[48]

The Army's traffic was a substantial though minor part of the total traffic handled by the rail lines. Freight shipped on War Department bills of lading amounted to 5.1 percent of the total ton-miles of revenue freight during 1942, 7.6 percent in 1943, 9.3 percent in 1944, and 12 percent during the first half of 1945.[49] These percentages, of course, do not take into account the shipments of raw and semi-finished materials and finished products which moved on commercial bills of lading to and from the war industries. Figures for total Army passenger traffic are not available, but the organized groups routed in Washington accounted for 14.8 percent of the total revenue passenger-miles accomplished by the railroads in 1942, 12.7 percent in 1943, 9.5 percent in 1944, and 10.8 percent in 1945.[50] It has been estimated that this type of traffic represented between 50 and 60 percent of the total traffic moved on War Department transportation requests. There was no basis for computing the volume of travel by servicemen on furlough, since it was arranged individually.

Statistical comparisons do not correctly show the relative significance of military traffic as part of the total traffic. The large number of special trains required for the movement of troops and war matériel created additional problems for the carriers. Special loading techniques were required for the various types of explosives and the many large items of equipment, such as artillery, tanks, boats, locomotives, and aircraft assemblies. The bulky items often created clearance problems and necessitated special routings. An unusually large proportion of military shipments required open-top cars, which were scarce from the beginning of the war. Special control measures were necessary in connection with port-bound traffic, and diversions from original destinations frequently became necessary because of changed military plans or unforeseen traffic conditions. In brief, military movements absorbed a far greater share of the railroads' attention than the figures for volume would indicate.

Granting the readiness of the railroads from an organizational standpoint to deal

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[48] Data compiled by the Transport Economics Section, Traffic Control Division, OCT, indicate that in 1944 the average haul for Army freight was 735 miles; for troops moving in organized groups of 40 or more it was 1,096 miles.

[49] Based on AAR report cited n. 47, and data compiled by Transport Economics Section, Traffic Control Division, OCT. Army freight shipments fell off sharply after the end of hostilities.

[50] Up to January 1943 groups of 50 or more were routed by the Traffic Control Division, OCT; thereafter, groups of 40 or more. The increased percentage in 1945 was due to troops being repatriated.

FLATCARS FOR MOVING BULKY MILITARY EQUIPMENT, *in heavy demand throughout the war. Trainloads of trucks and tanks were a common sight along railroad right of ways.*

with wartime requirements, the ability of their plant and equipment to handle the vastly increased traffic gave rise to concern early in the war. The trackage and other fixed facilities of the railroads in the east were considered adequate, but the capacity of the lines serving the Pacific coast fully to support the war against Japan was held in doubt. The supply of cars and locomotives was believed by some to be the railroads' chief weakness, and the possibility of obtaining a substantial amount of new equipment was seen to be limited by competing demands upon the supply of steel and other basic materials. The loss of skilled manpower by the railroads, due to the operation of the Selective Service Act and the attractive opportunities for other employment, was recognized as a major problem. These aspects of the vital railroad situation, to which the Army Chief of Transportation gave careful attention, provide the subject matter for the sections which follow immediately.

As background for the discussion of these problems it may be said that the railroads met military requirements during the hostilities with relatively few delays and did so despite the fact that the civilians' right to travel and to ship was not drastically curtailed. Army officials gave warm praise to the railroads on numerous occasions in recognition of their excellent performance.[51] In accomplishing this result, however, the carriers were forced to operate under a heavy strain during the latter part of the war, which could not have continued indefinitely without deleterious effects.[52] It is to be considered, also, that the American railroads never were confronted with the problem of handling mass evacuations from bombed or invaded areas, nor were their operations ever disrupted by enemy air attack. In these respects they enjoyed a unique position among the transportation systems of the major participants in World War II.

Limited Capacity of the Western Railroads

As already indicated, concern over the ability of the American railroads to meet the military requirements involved chiefly the lines serving the Pacific coast. The eastern seaboard was supported by a heavy network of trunk lines which, with the addition of some yard capacity, seemed capable of handling any export traffic that the war might throw upon them. The capacity of the transcontinental and western lines, on the other hand, was limited by reason of the relatively small westbound traffic which they had been required to handle in peacetime, a limitation that applied to both line haul and port facilities. The fact that the Navy's chief effort was in the Pacific, that after the defeat of Germany the bulk of the Army's strength would be shifted to the Pacific theaters, and that a considerable quantity of Russian and British lend-lease supplies moved through the west coast ports forecast the heavy tonnage which the railroads west of the Mississippi would be called on to lift. The longer voyages involved in shipping to Pacific bases from Gulf and Atlantic coast ports and the necessity of getting the utmost service out of the available bottoms emphasized the importance of moving as much of this traffic as possible through Pacific coast ports.

The inadequacy of the western railway plant was felt first at the ports. The flood of

[51] See Ltr, SW to J. J. Pelley Pres AAR, 18 Oct 45; Ltr, Gen Gross to Mr. Pelley, 28 Nov 45. Both in OCT 080 AAR.

[52] See "Miracles Have Limits Says Colonel Johnson," *Railway Age*, March 24, 1945.

supplies and equipment which the Army and the Navy moved into San Francisco after the Japanese attack on our Pacific outposts convinced both the armed services and the railroads that additional storage tracks were needed in that area. Within a few days after Pearl Harbor the San Francisco Port of Embarkation recommended the addition of from 350 to 400 car lengths of new trackage, and approval was given promptly.[53] During the next year 3,000 additional car lengths were authorized for that area, and the need was recognized for more trackage at Los Angeles and Portland, which were beginning to play a larger part in the Pacific war.[54] During the years 1942–44 the new holding tracks installed in the San Francisco area totaled 7,200 car lengths, in the Los Angeles area 2,433 car lengths, and in the Portland area 1,350 car lengths. All of this new trackage was provided at government expense.[55] Additional holding tracks, as well as other plant facilities, were installed by the railroads at their own expense.

Evidences of congestion at points along the lines of the transcontinental railroads were reported during the summer of 1942.[56] Up to that time, however, the Army had encountered no serious delays, and it was known that the carriers were taking steps to increase their line haul capacity; therefore, when Mr. Gustav Metzman, then Chief of the Rail Division, called on the Association of American Railroads to make a survey of the potential capacity of its member lines no special mention was made of the lines west of the Mississippi.[57] By May 1943 the magnitude of the Pacific war had become more apparent, and General Gross then specifically requested that an investigation of the transcontinental lines be made to determine the extent to which the westbound freight movement of the armed forces could be increased. This request was directed to both the Office of Defense Transportation and the Association of American Railroads, but ODT arranged that the investigation in the field should be undertaken by AAR.[58]

As a first step in this investigation, Mr. J. J. Pelley and Mr. C. H. Buford, President and Vice President, respectively, of the Association of American Railroads, visited the western states and arranged for the carriers and the AAR representatives in that area to submit data and recommendations. On the basis of the reports received, AAR presented a detailed analysis to General Gross late in July 1943.[59] The reports indicated that many of the western railroads were installing additional yard tracks, passing tracks, and other facilities, and had ordered additional locomotives. The general conclusions drawn by AAR from the information received from the field were as follows: (1) that no additional facilities beyond those already contemplated should be provided unless a way could be found

[53] Memo, SFPE for QMG, 11 Dec 41; DF ACofS G–4 for CofEngrs, 20 Jan 42. Both in G–4/30105–11.

[54] Ltr, CG SFPE to Gen Gross, 1 Jan 43, and atchd data on problems of SFPE, p.3, OCT HB Gross San Francisco.

[55] Handwritten Memo, McIntyre for Gross, 31 May 44, OCT HB Gross Rail Capacity of Ports; Memo, C of Eng Br Rail Div OCT for C of Rail Div, 29 Nov 43, sub: Army-Constructed RR Yards on West Coast, OCT HB Rail Div Misc.

[56] Memo, Mgr Mil Trans Sec AAR for Col Williamson OCT, 10 Aug 42, OCT 080 AAR.

[57] Ltr, Metzman to C. H. Buford Vice Pres AAR, 30 Jun 42, OCT 080 AAR.

[58] Ltr, C. H. Buford Vice Pres AAR to Gross, 28 Jun 43; Ltr, V. V. Boatner Dir Div of RR Trans ODT to Gross, 31 Jul 43. Both in OCT HB Gross Rail.

[59] Ltr, 27 Jul 43, and atchmts, OCT HB Gross Rail Capacity of Western RR's.

to insure adequate personnel to operate those facilities; (2) that the government agencies involved should take steps to determine what the load on the western lines would be; and (3) that if additional capacity should be found necessary, the government agencies should determine where and by whom it should be provided. The Office of Defense Transportation informed General Gross that the AAR conclusions were substantially in accordance with its understanding of the situation and expressed the view that with the planned expansion of facilities and the additional equipment which the railroads might expect to receive, they would be able to handle the forthcoming traffic "with reasonable dispatch and efficiency." In his reply to ODT General Gross observed that his study of the reports submitted by the individual railroads had given him the impression that the field was more aware of the problem than were the agencies in Washington, and he expressed the fear that ODT and AAR were inclined to hold the railroads back rather than to urge them on in the expansion of their capacity.[60]

The Office of Defense Transportation then requested the Association of American Railroads to call a meeting of the executives of the transcontinental lines to consider what projects were most necessary to enable them to handle the anticipated increase in traffic.[61] General Gross attended this meeting, which was held in Chicago on 12 August 1943, and presented his views strongly. He urged that the western lines increase their capacity as much as possible. He stated that although the government was helping with the improvement of rail facilities at the ports and would assist the carriers with their manpower problems, the railroads themselves would have to assume responsibility for the increase in their line haul capacity. He asserted that it was the responsibility of ODT to give the railroads whatever assistance they needed for the prompt procurement of new equipment and facilities. Following the meeting, Gross expressed the belief that the carriers were "entirely justified" in their complaints regarding the delays encountered by their requests for additional facilities, and he took steps to obtain lists of the requested facilities from ODT in order that the Army might approach the War Production Board regarding them.[62]

General Gross got prompt reactions to his Chicago remarks from the War Production Board and the Office of Defense Transportation. A representative of the former agency submitted a copy of a recent report of its Railroad Industry Advisory Committee, which indicated that the projects for fixed facilities which had been filed for 1943 had been double those for the previous year, that the amount of rail on hand but unlaid was high, and that labor supply was considered the crux of the problem.[63] The Office of Defense Transportation, referring particularly to Gross's objection to the slow progress in the procurement of new railroad equipment and facilities, pointed out that the Army itself had opposed the assignment of a higher priority to railroad equipment and had objected to

[60] Ltr, V. V. Boatner ODT to Gross, 31 Jul 43; Ltr, Gross to Boatner, 3 Aug 43. Both in OCT 617 RR Facilities.

[61] Ltr, Boatner to Gross, 6 Aug 43, OCT HB Gross Rail.

[62] Gross's pencil notes for Chicago address, OCT HB Gross Rail Capacity of Western RR's; Ltr, Gross to F. C. Curley Vice Pres AT&SF Ry System, 20 Aug 43, OCT HB Gross Rail.

[63] Ltr from Andrew Stevenson Dir Trans Equipment Div WPB, 14 Aug 43, and atchd rpt, OCT HB Gross Rail.

the approval of certain new railroad facilities because the materials were needed for military projects.[64] During the preparation of a reply to the latter communication, General Gross commented that he already had taken steps to reduce the delays attributed to the Army, and he wanted ODT assured that the Army had no hostility to its programs for additional railway equipment and facilities; he felt, on the other hand, that ODT had been too cautious in pressing these programs and directed Col. John A. Appleton, then chief of the Rail Division, to urge upon ODT the "necessity for taking both speedy and decisive action." [65]

The concern over the capacity of the western railroads was based on estimates of freight shipments to the Pacific prepared in the Office of the Chief of Transportation by the combined efforts of the Planning, Rail, and Traffic Control Divisions. A study submitted in August 1943 estimated that the crest of the movement would be reached during the last quarter of 1945, when the peak day for deliveries of export freight at west coast ports would approximate 4,443 cars, or almost three times the anticipated peak day for the third quarter of 1943.[66] On this basis there was real cause for concern, especially in view of the limited improvement so far achieved in the transcontinental line haul.

A review of the situation which was submitted to the Office of Defense Transportation by Maj. Gen. LeRoy Lutes of the Army Service Forces in August 1944 displayed greater optimism. It took into account the increase in western railway facilities which had been accomplished during the past year, and a general acceptance of the necessity of using eastern ports for part of the Pacific supply movement. The transcontinental lines were expected to reach a daily average capacity of 5,195 westbound cars by October 1944 and to sustain that average thereafter. Requirements for the civil population and industry on the west coast were placed at 2,794 carloads daily, leaving 2,401 carloads available for export freight, including Army, Navy, lend-lease, and commercial shipments. In the light of current planning by the Army and the Navy, General Lutes believed that the transcontinental railroads would be capable of handling the load which would be placed on them.[67]

General Gross, who had just completed his second inspection tour of the Pacific coast, was in agreement with that view. He believed that while the line haul and port capacities of the western railroads would be heavily taxed, they would be able to meet the requirements of the armed forces in the final stages of the war against Japan. Although not pleased with the prospect that the Army would have to load a considerable amount of freight for the Pacific at Atlantic and Gulf ports, Gross pointed out that the disadvantage of this procedure would be lessened by the fact that some of this cargo would be lifted by ships which would be transferred from the Atlantic to the Pacific after the defeat of Germany.[68]

[64] Ltr, Joseph B. Eastman Dir ODT to Robert A. Lovett, Actg SW, 24 Aug 43, pars. 1 and 2, OCT HB Gross Rail.

[65] Memo for Appleton, 26 Aug 43, OCT HB Gross Rail.

[66] Memo, C of Plng Div OCT for Gross, 10 Aug 43, OCT HB Gross Rail Capacity of Western RR's.

[67] Ltr, Gen Lutes to J. M. Johnson Dir ODT, 10 Aug 44, OCT HB Gross Rail Capacity of Western RR's. It is to be noted that this estimate deals with daily averages, whereas the estimate referred to in the preceding paragraph was for a peak day.

[68] Ltr, Gross to J. M. Johnson ODT, 11 Aug 44, OCT HB Gross Rail Capacity of Ports.

Shortly after the German surrender the Association of American Railroads stated that the transcontinental lines then had a practical capacity of 5,200 loaded cars of westbound freight daily and that they already were moving about 5,000 cars daily.[69] AAR indicated that if the railroads were given adequate manpower and repair materials this capacity could be increased to about 5,615 daily. The westbound line haul had to accommodate both domestic and export freight. The rail facilities at the west coast ports, according to the AAR statement, were capable of handling 3,100 cars of dry cargo for export daily, which was well in excess of what they were handling currently.[70]

Because of the early end of the war in the Pacific, the actual capacity of the western railroads was not proved in practice. The above facts indicate, however, that if the war had continued, the limit on the movement of military supplies to the Pacific by that route would have been imposed by the line haul capacity of the transcontinental lines, rather than the rail capacity at the ports. Building up the transcontinental capacity naturally was a much more difficult task than adding to the rail facilities at the ports.

Under Section 124 of the Internal Revenue Code the railroads were permitted to apply for special amortization privileges, for tax purposes, in connection with facilities and equipment procured to meet war requirements.[71] Initially such applications required certification by the Secretary of War or the Secretary of the Navy with respect to the necessity for the projects, but in December 1943 the responsibility for certification was transferred to the War Production Board by Executive Order.[72] The Association of American Railroads expressed concern regarding this transfer while it was pending, on the ground that it would have a retarding effect on the railroads' program, but General Gross saw either no opportunity or no necessity for action on his part.[73]

Both before and after this procedural change the applications for certificates of necessity, the majority of which were from the western railroads, were investigated by the Chief of Transportation and recommendations were made to Army Service Forces headquarters for approval or disapproval.[74] The peak period for such applications was the fiscal year 1943, when over 1,500 were received. During the months of March, April, and May 1943 a total of 557 applications were considered by the Chief of Transportation and all were approved. Thereafter, the number of applications filed by the railroads declined,

[69] Ltr, C. H. Buford Vice Pres AAR to Rear Adm W. J. Carter, BUSANDA, 23 May 45, and atchd rpt, sub: Sustainable Capacity of Western Transcontinental RR's, OCT 511 Capacity of Transcontinental RR's.

[70] June 1945 produced the peak daily average of 2,226 cars of dry export cargo delivered to west coast ports. The capacity of those ports for petroleum export was about 700 cars daily, and in June 1945 the daily average was 454 cars. See Conf, author with W. F. Betts of AAR, 2 Dec 48, OCT HB RR Western Lines Capacity.

[71] See *Civilian War Transport*, pp. 213–16 for general discussion.

[72] Memo, Dir of Matériel ASF Hq for Dir Prod Div ASF Hq, 21 Dec 43, sub: Liaison with WPB on Applications for Necessity Certificates, OCT HB Rail Div Misc. The amortization period usually allowed was five years.

[73] Ltr, C. H. Buford Vice Pres AAR to Gross, 6 Nov 43; Ltr, Gross to Buford, 9 Nov 43; Ltr, Buford to Gross, 17 Nov 43, with pencil notation by Gross, "no other action." All in OCT HB Gross Rail.

[74] See Memo, CofT for Dir Req Div ASF, 20 Aug 43, sub: Coml RR Expansion Projects before WPB, OCT 617 RR Facilities 1942–44.

and beginning in November 1943 there was a marked increase in the percentage of disapprovals.[75] During the fiscal year 1944, 845 applications were considered, of which 612 were approved, 190 were disapproved, and 43 were referred to other agencies. Since throughout this period General Gross continued to press for maximum rail capacity, it is evident that his efforts in that direction brought forth projects from the railroads which could not be justified from the standpoint of war necessity.

Procurement of New Railroad Equipment

In considering the condition of the American railroads at the outbreak of World War II, the effect of the general business recession of the 1930's must be taken into account. Traffic during this period had been relatively light and the income of the carriers had been correspondingly low. In consequence, orders for new equipment and plant improvements had been kept at a minimum, and an unusual amount of old rolling stock had been retired.[76] But while the number of cars and locomotives was much smaller, the units were larger and their work capacity was higher.

Between the end of 1917 and the end of 1941 the number of locomotives owned by the American railroads had decreased from 66,070 to 44,375, but the aggregate tractive effort was approximately the same.[77] Between these dates the number of freight cars owned by the railroads had decreased from 2,379,472 to 1,732,673, but the average capacity had increased from 41.5 tons to 50.3 tons. The number of passenger train cars owned by the Class I railroads and the Pullman Company (sleepers, coaches, parlor cars, club cars, dining cars, express cars, and baggage cars) had decreased from 60,710 to 44,948 but their average capacity was greater.[78] Despite the reduced number of units of equipment, the expenditure of more than ten billion dollars between the two wars for better locomotives and cars and improved plant facilities, together with improved arrangements for co-ordinated action, had given the railroads the ability to haul longer trains faster and to utilize their equipment more intensively.

In the early summer of 1940, following the German military successes in western Europe and the expansion of the American rearmament program, concern over the adequacy of our railroad equipment was expressed in various quarters. Mr. Ralph Budd, who had just taken office as Transportation Commissioner in the Advisory Commission to the Council of National Defense, almost immediately launched a campaign to improve the equipment situation.[79] Finding that the Class I railroads owned only 1,645,896 freight cars and that only about 15,000 new cars were on order, he advocated that the orders be increased so as to provide a total of 1,700,000 cars by 1 October 1941. In support of this plan, the Association of American Railroads

[75] ASF MPR, Sec. 3, Nov 43, p. 57; Annual Rpts, Rail Div OCT FY 1943 and 1944, OCT HB Rail Div Rpts.

[76] Compared with $872,608,000 spent for equipment, roadway, and structures in 1930, the Class I railroads spent a yearly average of $259,102,000 during the 9-year period 1931–39. See AAR, *Railroads in This Century,* p.11.

[77] AAR, *Railroads in This Century,* pp. 4, 6.

[78] Association of American Railroads, *Railroads and Defense* (Washington, 1941), p. 11; AAR, *American Railroads and the War,* p. 20.

[79] Memo for record by author, sub: Rail Equipment, 1 Jul 43, prepared following consultation of manuscript then being prepared under Mr. Budd's direction entitled, History of the Office of the Transportation Commissioner, OCT HB Topic Budd.

recommended to its members that 100,000 new freight cars be provided by the end of 1941.[80] The Army strongly supported these proposals and urged a review of the entire equipment situation, including locomotives.[81] The Transportation Commissioner also suggested the advisability of the government's procuring several thousand sleeping cars for troop use, but found AAR satisfied that the railroads could handle the prospective troop traffic without additional cars and the Army opposed in principle to the government ownership of such equipment.[82]

The year 1941 brought a reappraisal of the need for additional railroad equipment. The rapid growth of freight traffic during nine months of intensive rearming, and the passage of the Lend-Lease Act of March 1941, gave a new aspect to the situation. In April 1941, on the basis of estimates of freight traffic for the next three years, the Association of American Railroads informed its members that freight car ownership, which then was expected to reach 1,680,000 by the end of that year, should be increased to 1,800,000 during 1942 and to 1,950,000 during 1943.[83] In August The Quartermaster General expressed satisfaction with the AAR program for new freight cars but urged that the carriers take early steps to advance their passenger car programs, in view of "recent instances of tightness in the passenger car situation" and prospective increases in troop movements and furlough travel.[84] The AAR reply stated that the matter was being followed up with the member lines but pointed out that construction of passenger cars already on order was being delayed by inability to obtain adequate steel in competition with the military and shipbuilding programs.

By this time it was evident that the controlling factor in the railroad procurement program was not the extent of the orders placed but the ability to obtain the materials required by the builders. The Transportation Commissioner informed the Federal Loan Administrator, who had expressed willingness to make loans to facilitate the placing of freight car orders, that his most useful service would be the exercise of his influence to make the needed materials available.[85] In September 1941 the Transportation Commissioner informed the chairman of the Supply Priorities and Allocations Board that the A-3 preference rating which had been given to the freight car and locomotive builders in June was not high enough to overcome the lag in production and that the situation had become worse rather than better during recent months.[86]

[80] Ltr, W. T. Faricy Pres AAR to C. C. Wardlow, 6 Nov 48, and attached AAR press release of 12 May 41, OCT HB Topic RR Equip. Association of American Railroads, *Annual Report of the Car Service Division* (Washington, 1945), indicates that freight cars on order increased from 18,456 on 1 Sep 40 to 92,033 on 1 Sep 41.

[81] Memo, CofEngrs for CofS USA, 24 Jul 40; Memo, QMG for ACofS G-4 USA, 6 Aug 40; Ltrs, SW to Ralph Budd, 7 Aug 40 and 21 Oct 40. All in AG 453 (7-24-40) Shortage of RR Equip.

[82] Memo by author, 1 Jul 43, cited n. 79; Memo, ACofS G-4 for CofS USA, 15 Aug 40, G-4/29717-41; Ltr, Ralph Budd to Edward G. Budd, 16 Sep 40, OCT HB Topic Budd; Memo, ACofS G-4 for CofS USA, 19 Sep 40, par. 3, AG 453 (7-24-40) Shortage of RR Equip.

[83] Personal Memo, Pres AAR for Execs of Member Lines, 30 Apr 41, OCT HB Topic Budd.

[84] Ltr, QMG to C. H. Buford Vice Pres AAR, 15 Aug 41; Ltr, Buford to QMG, 16 Aug 41. Both in OCT 080 AAR.

[85] Ltr to Jesse H. Jones, 25 Jul 41, OCT HB Topic Budd.

[86] Ltr to Henry A. Wallace, 25 Sep 41, OCT HB Topic Budd. Preference ratings were given to insure that materials were allocated to manufacturers in accordance with the urgency of the need for their products. The highest preference rating at that time was A-1-a.

After the entry of the United States into the war the need for additional railroad equipment grew more pressing and the difficulty of obtaining it became greater. The competition for materials, between the military and shipbuilding programs on the one hand and domestic transportation on the other, had many ramifications which cannot be discussed here. Fundamentally it was a problem of utilizing the available materials, which were not sufficient to meet all requirements fully, in the manner that would best promote the war effort, and naturally there were differences of opinion on this vital issue.[87] The Office of Defense Transportation, which had been established in December 1941 with over-all responsibility for the adequacy of the carriers' services, requested the allocation of materials for new railroad equipment in accordance with programs worked out in collaboration with the carriers. Generally speaking, the Army supported these plans and urged the War Production Board to provide for their fulfillment—but not at the expense of the Army supply program. The Army policy of protecting its program did not allow the amount of rail equipment to be built which General Gross, as Chief of Transportation, believed the carriers should have, but military considerations were overriding.[88] The military program, it will be recalled, included considerable equipment for the Army's utility railroads in the zone of interior and the military railways overseas.

The quantity of materials allocated to the equipment programs of the commercial railroads consistently fell short of the amounts sought, and the War Production Board was subject to considerable criticism, since it had not given top priority rating to such equipment.[89] The War Production Board, on the other hand, considered the armed services basically responsible since their heavy and insistent demands for military equipment and ships limited the materials available for other purposes. In the winter of 1945, when the railroad situation was critical, the Director of Defense Transportation stated that from the beginning of the war he had believed that the carriers should be strengthened with added equipment and by the protection of their manpower, but that he had been unsuccessful in getting that idea adopted.[90] He pointed out the apparent inconsistency of the armed services in procuring and expending great quantities of munitions to destroy the enemy's transportation facilities while allowing our own to deteriorate. The attitude of the Army may be attributed to the doctrine that the paramount requirement for waging

[87] See Civilian Production Administration, *Industrial Mobilization for War, History of the War Production Board and Predecessor Agencies 1940–1945* (Washington, 1947), Vol. I, pp. 273–305, 549–62; also *Logistics in World War II, Final Report of the Army Service Forces* (Washington, 1947), pp. 207–08.

[88] Pencil Memo, Gross for Gen Lucius D. Clay, DCofS for Requirements SOS Hq, 19 May 42, with proposed letter to Donald Nelson Chm WPB, OCT 453 Rail Equip Program; Memo, Clay for Gross, 22 May 42, OCT 453 Rail Equip Program; Memo, Clay for CG SOS, 11 Aug 42; Memo, Gross for Somervell, 12 Aug 42, with draft of memo for Nelson; Ltr, USW to Nelson (revision of Gross draft), 18 Aug 42; Ltr, Somervell to Nelson, 13 Nov 42. Last four in OCT HB Gross Rail AAR Equip Program.

[89] Eastman, *Selected Papers*, pp. 47, 91; ODT, Annual Report to the President for the Year 1942, p. 11, OCT HB Topic ODT; *Hearing Before the Subcommittee of the Committee on Appropriations, House of Representatives, 78th Cong., 1st Sess., on the Military Establishment Appropriation Bill for 1944* (Washington, 1943), pp. 252–53; *Civilian War Transport*, pp. 193–98.

[90] General Statement of Transportation Situation, Feb 45, atchd to Study VE–9 prepared for OWMR, sub: Trans V-E Day to V-J Day, OCT HB TC Gen Redeployment.

successful warfare is a well-equipped fighting force in the field and to the realization that a considerable reduction of the load on transportation could be accomplished by curtailing nonessential civilian traffic.[91]

Until late 1943 railroad equipment, and in fact all the programs of the Office of Defense Transportation, had a preference rating of AA–2X, while military equipment and ships had the higher rating AA–1.[92] Then, with the production of materials steadily increasing, the War Production Board was able to raise the ratings applicable to many transportation items, and the allotment of materials to the domestic transportation industry accordingly increased.[93] The ensuing increase in orders for cars and locomotives did not meet expectations, however. The Senate Special Committee Investigating the National Defense Program, which had recommended the improved rating, attributed the reluctance of the railroads to place additional orders to financial reasons, but took cognizance of the tremendous increase in the carriers' earnings on account of war traffic.[94] The Director of Defense Transportation stated that he could understand the railroads' hesitation to purchase additional freight cars wholly for "war insurance," but that he did not regard as such the cars which the railroads then were being urged to order, in view of the advanced age of existing equipment.[95] He much preferred that the railroads should not force the government to purchase the additional freight cars which his office considered necessary. As it developed, the government did not procure freight cars or locomotives for the use of the common carriers, but did acquire troop train equipment, hospital cars, and tank cars which were needed specifically for military purposes.

Bearing in mind the fact that after the extent of the need for railroad equipment had been determined by the Office of Defense Transportation it was also necessary for the individual carriers to place orders and for the War Production Board to allocate the required materials, it is of interest to note what part of the estimated requirements actually was produced. Data for the critical years 1942, 1943, and 1944 are presented in Table 11. It also will be of value to review separately the wartime experience with respect to locomotives, freight cars, and passenger train cars, since the circumstances were different in each case.

Among the several types of railroad equipment, locomotives were the first to become critical.[96] Many of those on hand were old and of uncertain dependability. During the 10-year period, 1932–41, the number of new locomotives put in service annually by the Class I railroads averaged only 245.[97] A longer time was required for building locomotives than for building cars. The problem was further complicated by

[91] See Ltr, Gen Gross to J. J. Pelley Pres AAR, 22 May 42, OCT HB Gross Rail AAR Equip Program.

[92] Office of Defense Transportation, Annual Report to the President, 1943, p. 45. For background of priority problem, see D. W. Odiome, "The Material Situation and its Effect on Freight Cars," *Railway Age*, June 5, 1943.

[93] *Civilian War Transport*, p. 198; ODT press release, 16 Feb 44, OCT HB RR Equip.

[94] The Senate Special Committee Investigating the National Defense Program, *Third Annual Report* (Washington, March 4, 1944), p. 114.

[95] Eastman, *Selected Papers*, p. 360, address delivered, 3 Feb 44.

[96] ODT, Annual Report to the President, 1942, p. 11.

[97] AAR, *Annual Report of the Car Service Division*, 1945, p. 24. In contrast, 2,399 new locomotives were put in service in 1926, 1,955 in 1927, 1,390 in 1928.

TABLE 11—EQUIPMENT REQUIREMENTS OF THE AMERICAN RAILROADS (ALL CLASSES) AS STATED BY THE OFFICE OF DEFENSE TRANSPORTATION, AND ACTUAL PRODUCTION: 1942–1944.

Equipment and Year	Requirements	Production	
		Total	Percent of Requirements
Locomotives			
1942	2,126	705	33.2
1943	900	830	92.2
1944	1,133	965	85.2
Freight Cars			
1942	175,000	59,866	34.2
1943	73,500	28,790	39.2
1944	63,000	42,150	66.9
Passenger Train Cars [a]			
1942	3,000	377	12.6
1943	1,600	661	41.3
1944	550	939	[a]

[a] Passenger train cars produced in 1942 were those for which materials had been allotted previously. Cars produced in 1943 and 1944 were the 1,200 special troop sleepers and 400 troop kitchen cars ordered by the government, requirements for which are shown for 1943. No cars were produced in 1944 against requirements shown for that year.

Source: Civilian War Transport, p.195.

the fact that the railroads wanted a large percentage of diesel locomotives, and diesel engines were in great demand for naval and merchant vessels and also for locomotives for the Military Railway Service in the theaters and for our allies.[98] Because of the urgency of the need, however, 92 percent of the estimated locomotive requirements actually was produced in 1943 and 85 percent in 1944 (Table 11). Of the total of 3,066 new locomotives put in service by the Class I railroads in the 4-year period, 1942–45, 1,891 were diesels or diesel electrics and 1,175 were steam.[99] Whereas the railroads (all classes) owned 44,375 locomotives on 31 December 1941 they owned 46,253 on 31 December 1945, an increase of 1,878, taking into account necessary retirements.[100] Although locomotives were less critical than cars during the latter part of the war, it nevertheless was necessary for the railroads to use them to utmost capacity.

[98] Ltr, C. H. Buford Vice Pres AAR to Brig Gen T. H. Dillon, DCofT, 2 Feb 43, OCT 080 AAR; Ltr, Gen Gross for Brig Gen C. D. Young ODT, 31 May 43; Ltr, Young for Gross, 5 Jul 43; Ltr, Gross for Young, 14 Jul 43. Last three in OCT HB Gross Day File.

[99] AAR, *Annual Report of the Car Service Division*, 1946, p. 25.

[100] AAR, *Railroads in This Century*, p. 4.

Tightness in the supply of some types of freight cars appeared early in the war, but the over-all situation did not become threatening until later. During 1943, despite heavier loading and other measures to utilize the cars with utmost efficiency, the number of cars reported as surplus in the several areas steadily decreased and the reported shortages steadily increased.[101] The president of the Association of American Railroads had stated late in 1942 that the carriers were "close to the bottom of the barrel" in their effort to increase the utilization of existing equipment.[102] Because of the low preference rating, the number of freight cars produced in 1942 was only 34 percent of the requirements estimated by the Office of Defense Transportation, and in 1943 it was only 39 percent; in 1944, despite a higher rating, production was only 67 percent of estimated requirements (Table 11). Meantime, wear and tear had forced many cars into retirement. As a consequence, the net increase in the number of freight cars owned by the railroads (all classes) between the end of 1941 and the end of 1944 was only 64,339 cars, or 3.7 percent.[103] Against this, the ton-miles of revenue freight increased 55 percent between the years 1941 and 1944. Thus the stage was set for the freight car crisis which developed early in 1945.

This crisis was precipitated by unusually severe snow and ice in the northeastern part of the United States, but more basic causes lay in the limited supply of freight equipment and the lack of labor reserves. The situation necessitated a series of embargoes on civilian shipments into the area affected. Military shipments were exempted from the embargoes, but the Army voluntarily curtailed the movement of supplies that were not urgently needed in order to lighten the carriers' burden.[104] Generally speaking, essential military shipments, which were heavy on account of the critical operations in Europe, were put through promptly, but some were delayed because of the inability of the railroads to provide the cars immediately.[105] The immobilization of equipment in the northeast, together with the limited supply of cars, adversely affected transportation throughout the country. The boxcar situation was particularly serious in relation to the movement of grain and flour, including the Army's program for the shipment of civilian supplies to the liberated areas of Europe, a program that was attaining large proportions in the spring of 1945. As much as two years later the civilian aid movement still was handicapped by the inadequate supply of boxcars.[106]

During the early part of the war the need for additional passenger train equipment was less urgent than the need for locomotives and freight cars, and very little was built. As a result, the railroads and the Pullman Company owned less serviceable equipment of this type at the end of 1943 than at the end of 1939.[107] The restraint on the construction of passenger equipment

[101] C. B. Peck, "Freight-Car Needs Exceed Supply," *Railway Age*, January 1, 1944; ASF MPR, Sec 3, Jan 44, p. 83; AAR, *Annual Report of the Car Service Division*, 1945, p. 21.

[102] Address by J. J. Pelley, Chicago, 16 Oct 42, OCT HB Topic RR Equip.

[103] AAR, *Railroads in This Century*, p. 6, shows 1,732,673 cars owned on 31 Dec 41 and 1,797,012 on 31 Dec 44.

[104] Memo, Lt Gen W. D. Styer, CofS ASF for C's of Tech Svs, sub: Rail Embargo, OCT 617.

[105] Conf, author with Col H. G. Randall C of Contl Br Traf Contl Div OCT, 20 Mar 45, OCT HB Topic RR Crisis 1945.

[106] Rpt of Opns Mtg OCT, 16 Apr 45, OCT HB Dir of Opns, Opns Council Mtgs; "Crisis Threatens Transportation," *The New York Times*, March 3, 1947.

[107] Ltr, AAR for C. C. Wardlow, 13 Nov 44, and atchd statistics, OCT HB Topic RR Equip.

continued throughout the war, except for the specially designed troop train and hospital train cars which were procured by the government.[108]

In April 1942 the Association of American Railroads proposed that the Army procure 2,500 coaches and 500 "head-end cars" (baggage cars for temporary use as troop kitchen cars), and rent them to the railroads on a mileage basis, but the Army believed that the existing passenger equipment would be adequate in view of the possibility of limiting civilian traffic.[109] Also, the Army still was opposed to government ownership of such equipment. AAR took the matter up again in February 1943, this time proposing the construction of troop sleepers and troop kitchen cars of simplified designs which would require a minimum of scarce materials and a minimum of production time, but the Army still was unreceptive.[110] The Army, however, found the proposed designs acceptable, and, anticipating an increase of 50 percent in troop traffic in 1943 over 1942, it endeavored to impress upon the railroads their responsibility for procuring such additional passenger equipment as might be needed. At this point the Office of Defense Transportation took a hand in the matter and arranged for the Defense Plant Corporation to finance the construction of 1,200 troop sleepers and 400 troop kitchen cars.[111] The last units of this equipment were not delivered until well into 1944.

Soon after V-E Day the Office of Defense Transportation proposed that the government place a further order for 1,200 troop sleepers and 400 troop kitchen cars to aid in the heavy movement of military personnel during the period of redeployment and repatriation.[112] The Army offered neither active opposition to nor active support of the project. General Gross informed ODT that he was "somewhat disturbed by the late and rather hastily considered proposal" to have the Defense Plant Corporation build this additional equipment "for a load of such short duration," rather than enforce a "firm denial" of transportation to the public.[113] Since the cars were to be built, however, the Army urged that this be done as quickly as possible in order that they might be available during the period of greatest need. Unfortunately, industrial strikes delayed the completion of the second lot of 1,200 sleepers and fewer than 400 had been delivered up to 31 December 1945, by which time the peak of the repatriation movement was past.

The Army placed orders for a total of 200 new hospital cars and 60 new hospital kitchen cars in 1944 and 1945 to transport patients in the zone of interior. These were

[108] ODT press release, 18 May 45, OCT HB Topic RR Equip; Ltr, J. J. Pelley Pres AAR to Gen Somervell, 5 Jun 45, OCT 531.2 Troop Sleepers and Kitchen Cars.

[109] Ltr, J. J. Pelley Pres AAR to Gen Somervell, 13 Apr 42; Ltr, Somervell to Pelley, 13 May 42. Both in OCT HB Gross Troop Sleepers and Kitchen Cars. An ODT survey late in 1942 showed that about one out of every three persons using trains and buses was traveling for social or amusement purposes. See "The Huge Task of the Railroads," Magazine Section, *The New York Times*, January 31, 1943.

[110] Ltr, Pelley to Somervell, 12 Feb 43; Ltr, Gross to Pelley, 20 Feb 43. Both in OCT 617 RR Gen.

[111] Ltr, Dir ODT to Fed Loan Adm, 16 Mar 43, and Reply, 19 Mar 43, OCT HB Gross Troop Sleepers and Kitchen Cars.

[112] Ltr, Dir ODT to Fed Loan Adm, 25 May 45; Memo, C of Traf Contl Div OCT for CofT, 29 May 45; Ltr, Dir ODT to Fed Loan Adm, 29 May 45. All in OCT HB Gross Troop Sleepers and Kitchen Cars.

[113] Ltr, Gross to Dir ODT, 30 May 45; Ltr, CG ASF for Chm WPB, 6 Jun 45. Both in OCT HB Gross Troop Sleepers and Kitchen Cars.

specialized types of cars which the railroads could not be expected to procure. The orders for this new equipment obviated the necessity of withdrawing additional Pullman cars from general use for conversion to hospital cars, and at the same time gave The Surgeon General a more satisfactory type of mobile hospital unit.[114]

Although in the early part of the war the procurement of new equipment was limited by the low preference rating given such projects by the War Production Board, repair and maintenance work on existing equipment had an AA–1 rating from the beginning. This enabled the railroads to place most of their old equipment, of which an unusually large percentage had been in bad order, in serviceable condition. Between 1 September 1939 and 1 September 1943 freight cars laid up for repairs were reduced from 13.8 percent of the total ownership to 2.8 percent, and steam locomotives awaiting repairs were reduced from 20.0 percent to 5.3 percent.[115] The railroads and the Pullman Company were also enabled to convert many units of passenger equipment to make them better serve the war need. In January 1943 the Office of Defense Transportation announced that approximately 800 lounge, parlor, and chair cars had been or were being converted into sleepers or coaches.[116]

Railroad Manpower

Throughout the war, shortage of manpower was the most serious problem confronting the rail carriers. The number of persons employed by the Class I railroads gradually increased from an average of 987,675 in 1939 to an average of 1,419,505 in 1945.[117] This increase was not proportionate to the increase in traffic, however, and at times there were as many as 100,000 unfilled positions in the industry.[118] This lack of workers prevented the railroads from getting maximum service from their limited equipment and added to the operating hazards.

An appreciation of the carriers' problems in connection with manpower requires that they be viewed in the light of the general employment situation. Between February 1942 and February 1945, a period of expanding industrial activity, the total civilian labor force in the country decreased from 53,200,000 to 51,400,000.[119] This decrease occurred despite the addition of approximately 4,400,000 women workers. The number of male workers decreased between those dates from 39,900,000 to 33,700,000. The pool of unemployed, which had exceeded 15,000,000 a decade earlier, for all practical purposes had disappeared.

In the competition for workers among the wartime industries the railroads were at a disadvantage for several reasons. Many transportation wage contracts based on peacetime wage scales were in effect at the time wages were frozen, so that, particularly in the less skilled and unskilled categories, the railroads were a low-wage industry. This

[114] Hospital train equipment is discussed in the next chapter.

[115] AAR, *Annual Report of the Car Service Division*, 1945, pp. 23, 25.

[116] OCT HB Monograph 22, p. 71.

[117] Association of American Railroads, *Railroad Transportation* (Washington, November 1948), p. 22. The railroads had more than 2,000,000 employees in 1920, and 1,660,000 in 1929.

[118] Railroad Retirement Board, *Annual Report* (Washington, June 30, 1944), p. 50. In September 1944 more than 55 percent of the unfilled jobs called for unskilled labor. See Railroad Retirement Board, Rpt, Personnel Needs and Surpluses in the Railroad Industry, September 1, 1944.

[119] *Quarterly Report of the Director of War Mobilization and Reconversion*, April 2, 1945, p. 4.

increased their difficulty not only in attracting additional workers but also in holding those they had.[120] In contrast with the mass production industries, the railroads had relatively few jobs that could be broken down into routine operations performable by women or other inexperienced workers. Safety considerations related to train operations limited the extent to which over-age persons, students, vacationists, soldiers on furlough, and other untrained personnel could be used. Nevertheless, the industry drew heavily on these classes for permanent and short-term employees.[121] The number of women employed by the railroads increased during the war from about 30,000 to about 116,000.[122] About 125,000 unskilled Mexican laborers were imported into the country on six-month renewable contracts, under arrangements made with the Mexican Government through the U.S. Department of State, for employment as track workers, principally by the western lines.

There were long but unproductive negotiations regarding the use of prisoners of war for maintenance of way.[123] The railroads were willing to employ about 10,000 of these men and the Army indicated its willingness to provide them. Numerous obstacles stood in the way, however, including the fear of sabotage, and only a few hundred laborers from this potentially large supply actually were used by the railroads. They were employed chiefly on snow removal and car-cleaning jobs.[124]

With transportation, as with industry in general, selective service was at the root of the manpower problem. Toward the close of hostilities the Office of Defense Transportation estimated that 300,000 railroad workers were in the armed services.[125] For the most part these were common laborers or men of lesser skills. The more skilled railroad employees—those engaged in so-called critical occupations—were eligible for occupational deferment from the beginning. In the winter of 1945 deferments were in effect for approximately 55,000 railroad employees under thirty years of age.[126] Although repeated efforts had been made by the carriers to obtain more liberal treatment under the draft, they had not been successful, and the deferment policy was tightened rather than relaxed as the war progressed.[127]

[120] Senate Special Committee Investigating the National Defense Program, *Third Annual Report*, p. 443; "Manpower Shortage Menaces Transportation," *Railway Age*, March 4, 1944.

[121] Railroad Retirement Board, *Annual Report*, (Washington, June 30, 1945), p. 42, states that during FY 1945 the board effected 646,073 regular placements and 542,729 one-day placements; of latter figure 179,831 were servicemen.

[122] Association of American Railroads, Interesting Facts About the Railroads, August 31, 1945; Railroad Retirement Board, *Annual Report*, June 30, 1945, p. 44.

[123] See Memo, AAR, Use of Prisoners of War for Railroad Track Labor, 23 Jun 44, OCT HB Topic RR Manpower; Ltr, CofT for Dir ODT, 1 Jun 44, OCT HB Gross Rail Manpower and Equip Shortage.

[124] Memo, DCofS for SvC's ASF for CG ASF, 11 Feb 44, sub: PW Labor on RR's, ASF Hq RR 1943–1944; Memo, C of Rail Div OCT for CofT, 22 Jan 45, OCT 617; Conv, author with Mr. Arthur H. Gass, Mgr Car Sv Dir AAR, 30 Dec 48, OCT HB Topic RR Manpower.

[125] *Railway Age*, April 28, 1945, p. 757; Selective Service System Occupational Bull 5, 2 May 42, OCT 322 Ry Bns; *Civilian War Transport*, pp. 220–21.

[126] Ltr, C. H. Buford Vice Pres AAR to Brig Gen A. F. McIntyre C of Rail Div OCT, 8 Mar 45, and atchd statement, OCT HB Gross Rail Manpower and Equip Shortage.

[127] In February 1944 Joseph B. Eastman, Director of ODT, took issue with the railroads on question of exemption from draft, contending that they were in no different position in this respect from other war industries, and were less vulnerable than other forms of transportation because the average age of railroad employees was higher. See Eastman, *Selected Papers*, pp. 361–63.

Early in 1945, with the most critical part of the war just ahead and with extraordinarily bad weather harassing them, the railroads were confronted with the loss of many of their highly skilled men to the armed forces, as well as with further inroads by selective service into the less skilled ranks. Under these circumstances a last effort was made to obtain relief from the draft, but this relief was not realized until after V-E Day.[128]

The Army was in the same difficult position regarding railroad labor that it was regarding railroad equipment. It recognized the carriers' need and it recognized also the indispensability of efficient railroad service to the war effort. There were competing demands for manpower, however, which were equally or more important to the military authorities. The armed services had to be kept at sufficient strength to perform the tasks outlined for them in approved strategic plans. The huge industries which were producing weapons and supplies for the armies in the field required adequate labor forces to keep their production schedules from lagging. The Military Railway Service required troops trained in all the railroad skills to enable it to serve the theater commanders properly. Consequently, until late in the war the Chief of Transportation refrained from recommending any broad relief for the carriers under the draft. In February 1944 General Gross, reporting to General Somervell regarding the railroads' situation, said: "These [personnel] problems can be solved by vigorous efforts of railroad management augmented by energetic and sympathetic assistance of the federal agency charged with responsibility for the railroads' well-being—the Office of Defense Transportation." [129] A few weeks later he wrote to the president of the Association of American Railroads: "I urge, therefore, that the railroads take every step possible to meet the situation ahead by obtaining all the men that can be obtained and by eliminating, as far as practicable, labor turnover . . . ." [130] In March 1945, however, Gross was convinced that broad draft relief was necessary. At that time he took note of the railroad industry's vigorous effort to recruit additional labor and of the meager help given it by the government, and said: "Many signs show that it [the industry] has reached the elastic limit, that disintegration is threatened if its appeals continue to be met [on the part of the government] by the same lack of response and willingness to gamble . . . ." [131] As indicated, his change of attitude on the question of draft relief for the railroads was not at that time reflected in higher military echelons which were concerned with draft policy.

Since up to V-E Day the railroad manpower problem was not met by any broad policy of draft deferment or exemption, it is of interest to note the measures actually taken by government agencies to help the carriers. The number of agencies involved added to the complexity of the problem.

[128] J. M. Johnson, who succeeded Eastman as Director of ODT, following death of latter in March 1944, vigorously supported the railroads' effort for draft relief. See his statement, 5 Jan 44, as member of ICC, before subcommittee of Senate Committee on Interstate Commerce, in OCT HB Gross Rail Manpower and Equip Shortage. See also his Ltr to Dir OWM, 12 Feb 45, and Army comment thereon in Ltr, SW to Johnson, 6 Mar 45, AG 327. 22 (12 Feb 45).

[129] Memo, 7 Feb 44, sub: Opng Condition of Coml RR's, OCT HB Gross Rail Manpower and Equip Shortage.

[130] Ltr, 11 Mar 44, OCT 080 AAR.

[131] Memo for Somervell, 23 Mar 45, OCT HB Gross Rail Manpower and Equip Shortage.

The probability of a labor shortage on the railroads was foreseen in Army circles early in the war, and in the summer of 1942 the Chief of Transportation put forward a proposal designed to forestall it, for a period at least. His plan called for inducting forty to sixty thousand railroad employees into the Army, training them as units for the Military Railway Service, and then returning them on furlough to the railroads until such time as they might be needed for the military railways overseas.[132] The plan would have helped the railroads temporarily by preventing this skilled personnel from drifting to other industries or being drafted into the armed forces and assigned to services where their railroad experience would have been lost. It was uncertain, of course, how long these units could be retained in the zone of interior, but since they were to be considered a reserve their early assignment overseas was not anticipated. The proposal was discussed with officials of the Association of American Railroads before General Gross presented it officially. General Somervell approved the plan, but it was not concurred in by the G–1 of the War Department General Staff, primarily because at that time it was not considered advisable to furlough military personnel to commercial employment.[133]

After the conference in Chicago on 12 August 1943, at which the problems of the transcontinental railroads relating to manpower and equipment were discussed, General Gross prepared letters for the signature of the Acting Secretary of War to the Office of Defense Transportation and the War Manpower Commission, urging action to strengthen the carriers' personnel situation.[134] The letter to ODT dealt particularly with the need for relaxing the full crew laws and other provisions in the contracts between the railroads and the unions (the so-called featherbed rules) which prevented the utilization of labor to its full capacity.[135] The letter to the War Manpower Commission recommended that arrangements be made for the more extensive employment of Mexican labor and the utilization of prisoners of war, that draft deferment be extended to railroad employees in critical occupations until replacements could be provided, and that steps be taken to discourage the migration of railroad workers to other industries which seemed to offer better opportunity for draft deferment. The ODT response to this appeal included the promulgation of a "13-point program" which included concrete proposals for dealing with many aspects of the problem.[136] Concurrently the Office of War Mobilization established in critical western areas production urgency committees and manpower priority committees, which included representatives of the Office of Defense Transportation.

The ODT 13-point program called for a special recruiting drive to increase the railroads' labor force. This drive did not get

[132] Memo for Somervell, 29 Jun 42, ASF Hq Trans 1941–42; Memo for CG SOS, 3 Oct 42, sub: Ry Pers, and atchd memos to CofS USA and CofEngrs SOS for signature, OCT 322 Ry Bn (Tng and Deferment).

[133] Memo, Gross for Somervell, 18 Nov 42, sub: Ry Reserve Pers, ASF Hq Trans 1941–42.

[134] Ltrs, Robert A. Lovett to Joseph B. Eastman Dir ODT and Paul V. McNutt Chm WMC, 19 Aug 43, OCT HB Gross Rail.

[135] Senate Special Committee Investigating the National Defense Program, *Third Annual Report*, pp. 444–45, stated that average weekly hours of work on railroads had increased from 48.6 in June 1942 to 50.9 in July 1943, and were equaled by few other industries; that some progress had been made in overcoming effect of featherbed rules, but not enough.

[136] ODT press release, 5 Sep 43, and atchd program, OCT HB RR Manpower; ODT, Annual Report to the President, 1943, p. 42.

under way fully until the following spring (1944), after the Association of American Railroads had made a further futile attempt to obtain relief from the draft, this time by appeal to the Director of War Mobilization.[137] The drive was a concerted effort in which the War Manpower Commission, the War Production Board, the Office of War Information, the Office of Defense Transportation, the Army, the Navy, the Maritime Commission, the Railroad Retirement Board, and railroad management and labor collaborated, working through local railway urgency committees. General Gross followed the results of this undertaking closely and found them disappointing. After the special recruiting effort had been under way for ten weeks, he noted that the shortages reported by the carriers were greater than when it began.[138] The sources from which it was hoped to obtain added railroad personnel, particularly workers released from industries affected by cutbacks and veterans discharged from the armed services, did not yield the numbers expected. On the other hand, the number of persons leaving railroad employ was large and the total requirements were on the increase. During a period of 18 weeks, the drive resulted in 330,782 recruitments, but meanwhile 269,992 workers were lost to the railroads, so that the net gain was only 60,790 and the shortages still were large.[139]

In the fall of 1944, with the war going well in both Europe and the Pacific, it seemed for a time that the manpower crisis might have been passed. In December, however, the German Army counterattacked in the Ardennes region. This was followed by appeals from General Eisenhower for more troops and more matériel. The rate of induction under selective service was stepped up and the war industries called for more workers. On top of this came the worst winter in many years, with resulting sluggishness in railroad operations, which threatened to slow down the movement of military supplies to Europe. This situation called for renewed efforts to build up the railroads' personnel, and to these efforts the Army made a more direct though limited contribution.

During this critical winter the Army, despite its need for additional soldiers and increased draft calls, found it expedient to furlough men with certain skills so that they could fill vacancies in important industries.[140] Accordingly the Transportation Corps arranged in the middle of January 1945 for 300 soldiers with railroad experience to be furloughed so that they could help the carriers relieve the congestion in the Buffalo area where snow conditions were especially bad.[141] Requests from the Association of American Railroads and the Office of Defense Transportation resulted in the authorized maximum being increased to 600 and the area of employment being extended to other upstate New York districts. But pleas for the extension of the plan to New York City were rejected by the

[137] Ltr, J. J. Pelley to J. F. Byrnes, 24 Feb 44, OCT HB Gross Rail; Memos, C of Rail Div OCT for CofT, 7 and 8 Mar 44, OCT HB Gross Rail Manpower and Equip Shortage.

[138] Ltr to J. J. Pelley Pres AAR, 2 Jun 44, OCT 320.2 Manpower.

[139] Memo, Col A. F. McIntyre for Gen Gross, 22 Jul 44, OCT 320.2 Manpower.

[140] Ltr, SW to the President, 15 Jan 45, stated that six industries were using 16,500 furloughees and that plan might be extended to others, but emphasized that it was a stopgap arrangement which could not be continued. See ASF Hq Contl Div 220.41. For policies and procedures see WD Cir 105, 4 Apr 45.

[141] Memo, Col L. W. Finlay Exec OCT for Gen Gross, 23 Jan 45, sub: Rail Situation at Buffalo, OCT 617.

Army because the situation there was not found sufficiently critical to warrant the release of more soldiers.[142]

After the defeat of Germany the Army was able to take a somewhat more liberal attitude, and in June agreed to furlough 4,000 experienced railroaders from units then in the zone of interior, in order that they might work on the western lines.[143] Originally the furloughs were for 30 days, but subsequently were extended to 60 days. The railroads' request for 2,000 additional men was not favorably considered because not enough skilled railroaders had been found in the zone of interior to complete the original allotment. Up to 4 August 1945 only 3,100 skilled men actually had been put to work by the carriers, and the remainder of the allotment of 4,000 was filled with soldiers having no railroad experience.[144] The arrangement was discontinued promptly after the surrender of Japan.

It was obvious after V-E Day that, although the demand on the railroads would continue high until after the end of the war in the Pacific, the carriers could expect a considerable increment of manpower as the result of reduced activity in the war industries and the increased release of men from the armed forces. On 15 May it was announced that the entire railroad industry had been placed on a par with the most urgent war production on the National Production Urgency List, a classification previously accorded only to brakemen, firemen, and switchmen for railroads serving the west coast.[145] In order to insure that full advantage be taken of all opportunities for increased recruitment for the western lines, the Chief of Transportation set up special committees at Chicago, Omaha, and Salt Lake City, headed by the zone transportation officers at those points and including representatives of the Office of Defense Transportation, the War Production Board, the War Manpower Commission, the Railroad Retirement Board, the railroads, and local civic organizations.[146] The Commanding General, Army Service Forces, also designated officers at the principal western railroad centers to "spearhead an aggressive attack on the manpower shortages" and requested the technical services to lend these officers such additional personnel as might be needed.[147]

In July 1945 the Director of Defense Transportation urged that railroaders with the forces overseas, who were eligible for early release under the point system, be returned to the zone of interior and discharged at the earliest possible date.[148] The Army at first opposed this procedure, on the grounds that such preference in the order of repatriation would be bad for troop morale and that little time actually would be saved. The problem was complicated by the fact that not only transportation but many other industrial and professional groups had filed

[142] Memo, Finlay for Gross, 10 Feb 45, sub: Use of Troops on RR's, OCT HB Topic RR Manpower.

[143] WD press release, 29 Jun 45, OCT HB Topic RR Manpower.

[144] Memo, Gross for Somervell, 9 Aug 45, sub: Release of Skilled RR Workers, OCT 220.711 RR.

[145] Ltr, C. H. Buford Vice Pres AAR to C. C. Wardlow OCT, 17 Nov 44; ODT press release, 29 Sep 44 and 15 May 45. All in OCT HB Topic RR Manpower.

[146] Ltr, Gross to J. J. Pelley Pres AAR, 15 Jun 45, OCT 320.2 Activity in RR's; Ltr, Gross to C. D. Young ODT, 27 Jun 45, OCT HB Gross ODT.

[147] Memo, for Col W. J. Brennan Jr., *et al.*, 4 Jul 45, sub: Western RR Manpower Project, ASF Hq Contl Div 220.41; Memos, for C's of Tech Svs, 4 Jul 45, ASF Hq Contl Div 531.

[148] Ltr, Dir ODT to USW, 4 Jul 45; Ltr, USW to Dir ODT, 6 Jul 45. Both in OCT HB Gross RR Manpower and Equip Shortage.

similar requests with the Army, involving a total of at least a million men.[149] In response to an appeal for more manpower for the western railroads by President Truman, then attending the Potsdam Conference, and efforts by the Senate Special Committee Investigating the National Defense Program to have the Army release more railroaders to the western lines, the European and Mediterranean theaters were instructed to expedite the return of high-point personnel of the Military Railway Service, and arrangements were made to speed up the discharge of these men after their arrival in the United States.[150]

The dilemma in which the Army was placed, by being forced to choose between maintaining its armed strength at the planned level and sacrificing some of its personnel to the railroads and other hard-pressed industries, gave point to its attitude on the question of universal service. In January 1945, when soldiers were being furloughed reluctantly and for short periods to some of the key industries, the Secretary of War stated to the President: "We cannot afford to deplete our military strength in this fashion simply because our civilian manpower controls are inadequate . . . . In my mind, this demonstrates clearly the urgent necessity of enacting a National Service Law at once." [151] Whatever weight may be given to the other considerations involved, the conclusion is inescapable that, had the nation's entire manpower been mobilized, distributed, and controlled in a more effective manner, the personnel shortages which beset the vital industries, including transportation, and which remained a matter of deep concern to the armed services throughout the war, could have been relieved substantially.

Efficient Utilization of Railroad Equipment

The limitation on the amount of new equipment that could be placed in service during the war necessitated more intensive use of that which was available. This was accomplished by eliminating or reducing inefficient practices which had developed in peacetime as the result of carelessness on the part of shippers and of competition between the carriers. The drive for improved efficiency began early in the emergency, and as the war progressed it was continued with increasing effectiveness by the concerted efforts of all concerned—the Association of American Railroads, the individual carriers, the shippers' advisory boards, the Office of Defense Transportation which was expressly charged with this responsibility by the President, and the armed services.[152] The War Transportation Efficiency Committee, organized under

[149] WD press release, 19 Jul 45, OCT HB Topic RR Manpower; Ltr, Acting SW to Sen Carl Hayden, 26 Jul 45, OCT 220 Release of Soldiers for RR's.

[150] "Truman Appeals for Rail Workers," *Journal of Commerce* (New York), July 17, 1945; "Senate Appeals to Army to Send Railroads Help," *Times-Herald* (Washington), July 25, 1946; Memo, Gen Lutes ASF for Gen Craig OPD WDGS, 3 Aug 45, sub: Return of RR Workers for Discharge, OCT 200.711 Furlough of Soldiers for RR Industry; Msg, CofT to CO's of ports of embarkation, service commands, reception stations, and separation centers in U.S., 8 Aug 45, OCT HB Gross Rail Manpower and Equip Shortages.

[151] Ltr, 15 Jan 45, ASF Hq Contl Div 220.41. See also Rpt of Committee on Military Affairs, *Mobilization of Civilian Manpower,* HR 36, January 24, 1945.

[152] For outline of principles see statement by Joseph B. Eastman, Director of ODT, in proceedings of Pacific Coast Shippers' Advisory Board, 9 Dec 43. For outline of Army practices see statement by Col. W. J. Williamson OCT in proceedings of National Association of Shippers' Advisory Boards, 15 Oct 43. Both in OCT HB Topic RR Equip.

ODT auspices, served as a central agency in which the carriers and the civilian shippers collaborated.[153] About six hundred local car efficiency committees were set up by the shippers' advisory boards to carry on an educational campaign and police the situation in their respective areas.[154] The Army instructed its supply services and its transportation officers at field installations in great detail regarding their responsibilities, and charged the zone transportation officers with the duty of assisting the installations in the fulfillment of those responsibilities.

Before undertaking a brief survey of the methods by which more efficient use of railroad equipment was achieved, it is of interest to note some of the results of this undertaking. The following comparisons between the years 1939 and 1944 are indicative.[155] Between those years the average daily operating mileage for freight locomotives increased from 104.0 to 122.8; for passenger locomotives, from 184.2 to 222.9. The average net tons of carload freight per car increased from 36.8 to 40.3. The average number of passengers per car increased from 13.4 to 32.2. The average miles operated per day by freight cars (including those loading, unloading, awaiting repairs, or otherwise idle) increased from 31.7 to 49.3. The percentage of empty mileage for freight cars decreased from 37.7 to 34.3. Because of the greater number of trains on the rails, the average train speed decreased slightly—from 16.7 to 15.7 miles per hour in the case of freight trains and from 36.9 to 35.8 in the case of passenger trains.

One of the more serious of the wasteful practices against which a continuous campaign was waged was the unnecessary holding of freight cars by consignees who for one reason or another did not unload them promptly.[156] Equally wasteful was the tendency of shippers to call in empty cars before they could be loaded or in greater numbers than were needed. In order to promote the prompt loading and unloading of types of cars which were in especially heavy demand, the free period was reduced and demurrage charges were increased as circumstances required, through service orders issued by the Interstate Commerce Commission on request of the Office of Defense Transportation. The result of these efforts was that the over-all turnaround time of freight cars (time from placement for one load to placement for the next load) increased only slightly between 1941 and 1944 (from 13.6 days to 14.3 days), despite the heavier traffic, the shortage of labor, and the greater length of the average haul.[157]

The Army made a consistent effort to enforce the prompt release of freight cars at its installations. From the early days of the emergency, reports were received twice weekly from the Association of American Railroads regarding the number of freight cars under load at the installations, and in cases where the number was considered excessive immediate steps were taken to ascertain the cause and to effect a prompt reduc-

[153] ODT press release, 30 Dec 43, OCT HB Topic RR Equip.

[154] AAR, *Annual Report of the Car Service Division*, 1946, p. 16.

[155] Association of American Railroads, A Review of Railway Operations in 1945, pp. 26, 27, and AAR, *Annual Report of the Car Service Division*, 1945, p. 26.

[156] See Ltr to shippers and receivers of freight issued jointly by ODT, ICC, AAR, and the Natl Assn of Shippers' Advisory Bds, 2 Sep 43, OCT HB Topic RR Equip.

[157] *Civilian War Transport*, p. 314.

tion of the backlog.[158] Beginning in October 1942, the principal Army installations were required to make daily teletype reports to the Chief of Transportation, giving information regarding the status of all freight cars on hand.[159] Also, the commanding officers of installations were required to justify to the Chief of Transportation the detention of cars beyond the free time and the resultant demurrage charges.[160] General Gross personally took the matter up with the chiefs of technical services when installations under their control were found to be consistently slow in releasing cars.

Comparative data regarding performance at the various types of installations and in the various areas were compiled monthly by the Chief of Transportation and promulgated in order to stimulate increased efforts on the part of those installations having the less satisfactory records.[161] During November and December 1943, the first months for which over-all data were assembled for cars unloaded and released at Army installations, 63 percent were released within 24 hours after arrival, 24 percent were released between 24 and 48 hours after arrival, and 13 percent were not released until the 48-hour free period had expired. In May 1945 the corresponding figures for Army installations were 67 percent, 25 percent, and 8 percent.[162]

The Army took full advantage of permissible agreements with the carriers regarding weighing freight and demurrage credits, which contributed substantially to the conservation of car time. The Traffic Weight Agreement dispensed with track scaling and provided that charges would be based on weights inserted on the bills of lading by Army transportation officers, the weights to be either those authorized by existing tariffs and classifications, or those established by test weighing.[163] Such weights were subject to challenge by the carriers, who also had the privilege of inspecting the Army's records for purposes of verification. This agreement avoided the delay to equipment and freight involved in weighing shipments in the cars; it also saved manpower.

Average demurrage agreements, under which credits earned within the free time could be set off against debits incurred beyond the free time, initially were arranged between the transportation officers at the installations and the individual carriers.[164] Such agreements offered an inducement to the installations to release cars as promptly as possible, rather than holding them until the free time was about to expire. Later the Traffic Control Division negotiated a master average demurrage agreement with the Association of American Railroads, which embraced the individual agreements already in force and provided

[158] Ltr, OQMG (Lasher) to AAR (Kendall), 9 Oct 40, OCT 080 AAR. For occasional AAR rpts see file OCT HB Topic RR Govt Cons Projects. Reports initially dealt with car accumulation at Army construction projects where temptation to hold cars was especially great.

[159] Memo, CofT to CG's of SvC's, etc., 21 Oct 42, sub: Daily Car Situation Rpt, OCT HB Traf Contl Div Freight; WD Memo W55-1-43, 12 Jan 43.

[160] WD Memo, W55-23-43, 5 Jun 43, sub: Detention of RR Cars; Memo, CofT for CofOrd, 26 Feb 44, sub: Delays to Rail Equip, OCT 504.

[161] See study, Speed Achieved in Release of Freight Cars, in ASF MPR, Sec. 3, Aug 44, p. 71, and subsequent issues. Also, Monthly Car Situation, Jul 44–Apr 45, and Inland Transportation Report, from May 45, in OCT HB Traf Contl Div Inland Trans Rpt.

[162] For entire country, percentage of cars held over 48 hours was 23.2 in May 43, 17.1 in May 44, and about 15 in May 45. See AAR, The National Transportation Situation, 11 Jun 45, OCT HB Topic RR Equip.

[163] WD Cir 284, 25 Aug 42.

[164] AR 55-175, par. 4, 28 Aug 42.

a simple process for extending the master agreement to cover additional installations.[165] The Army proposed that where two railroads served an installation a surplus of credits on one line should be used to offset debits on the other, but AAR rejected this proposal.[166]

An unworkable accumulation of freight cars at railroad terminals inevitably resulted in loss of car time, and various measures were taken to forestall this condition. The ports were especially susceptible to congestion, as demonstrated in World War I, and elaborate machinery was established to control portbound traffic, a matter discussed more fully in another volume of Transportation Corps history. In order to insure liquid conditions on the transcontinental rail lines and at the gateways through which westbound shipments flowed, the Interstate Commerce Commission and the Office of Defense Transportation jointly placed an agent at Chicago with authority to reroute traffic as conditions might warrant.[167] The Car Service Division of the Association of American Railroads utilized its embargo power to check the movement of freight cars to points where congestion or the threat of congestion existed. The Traffic Control Division in the Office of the Chief of Transportation took such conditions into account when selecting routes and authorizing shipping dates for Army freight.

In order that Army installations receiving freight might prepare in advance for the prompt unloading and release of cars, Army installations and Army contractors originating shipments were required to give advance notice to the consignees by teletype or telegram. This requirement, which was initiated in March 1941, was considerably moderated as the war progressed and the need for such local control was reduced by the effective central control exercised by the Office of the Chief of Transportation. In order to give depots which were consignees of large and continuing shipments opportunity to request delay of movements which they could not handle promptly, shippers forwarding twenty-five or more carloads to such installations were required to obtain from them advance clearance on shipping schedules.[168] The railway operations at Army installations were kept under constant observation by the Chief of Transportation in order that any inadequacy of trackage or loading facilities might be corrected.[169]

Loss of car time through unnecessary cross-hauling and back-hauling of materials, parts, and assemblies in the processes of production and distribution was attacked by a number of agencies. The War Production Board and the Office of Defense Transportation studied the problem on a national scale and various remedies were proposed. Because of the high degree of specialization in industry, however, no general remedy could be applied, and the only appreciable results were achieved by bringing specific instances of wasteful transportation to the attention of the procuring or distributing

[165] Memo, C of Traf Contl Div for Gen Gross, 22 Apr 44, OCT 502 Demurrage Agreement.

[166] Ltr, AAR to CofT, 26 May 44, sub: Average Agreement—Pasco, Wash, OCT 520 Pasco H&R Point.

[167] *Civilian War Transport*, pp. 21–25. Expedited carload shipments of the armed services and military impedimenta were exempted from this control, on request of the Army.

[168] AR 55–105, par. 7, 29 Dec 42; WD Cir 419, Sec. IV, 26 Dec 42; WD Cir 63, Sec. V, 1 Mar 43; OCT HB Monograph 24, pp. 68–72.

[169] See Memo, C of Rail Div OCT for CofT ASF, 12 Mar 43, sub: RR Facilities for Emergency Mvmt, OCT 617 RR Facilities.

agencies involved.[170] As regards the Army, the Services of Supply undertook an active campaign against cross-hauling early in the war and made the chiefs of the supply (technical) service responsible for minimizing the practice within their respective fields.[171] The Chief of Transportation, however, since he was so vitally concerned with the problem because of its bearing on the over-all supply of cars, considered the entire field within his purview and directed his Traffic Control Division to make the subject a matter of continuing study. In December 1942 he recommended that each technical service be required to set up a board of officers to give the problem specific attention, and distribution planning boards were established soon thereafter.[172] These boards were discontinued in August 1943, and the functions which had been assigned to them were assumed by the Stock Control Division of the Army Service Forces.

In August 1944 General Gross's hand was strengthened in dealing with this problem by a War Department directive requiring transportation officers at depots and other stations to report to him all instances of wasteful transportation that came to their attention.[173] When investigations of such reports by zone transportation officers, or independent studies conducted by members of his own staff, indicated that avoidable cross-hauling or back-hauling was being practiced, the Chief of Transportation brought the facts to the attention of the technical services concerned and urged that remedial measures be adopted. Further pursuance of the matter rested with the technical services. Toward the end of the war an officer of the Transport Review Section of the Traffic Control Division, within whose purview this matter fell, expressed the opinion that while this method of dealing with cross-hauling and back-hauling had brought improvement in only a small percentage of the cases, the improvement was sufficient to justify the attention which the Chief of Transportation had given the subject.[174]

The peacetime practice of moving partly filled freight cars was attacked vigorously. The Office of Defense Transportation ordered that closed cars used for less-than-carload shipments be loaded to a minimum weight, which eventually was fixed at 20,000 pounds, and that carload shipments utilize the practical capacity of the cars.[175] The problem of capacity loading was given constant attention by the local car efficiency committees of the shippers' advisory boards. The Army, while exempt from the ODT orders, gave full support to the principle underlying them, and the pertinent Army regulation required that cars be loaded to the specified load limit or physical capac-

[170] Senate Special Committee Investigating the National Defense Program, *Third Annual Report*, pp. 423–26.

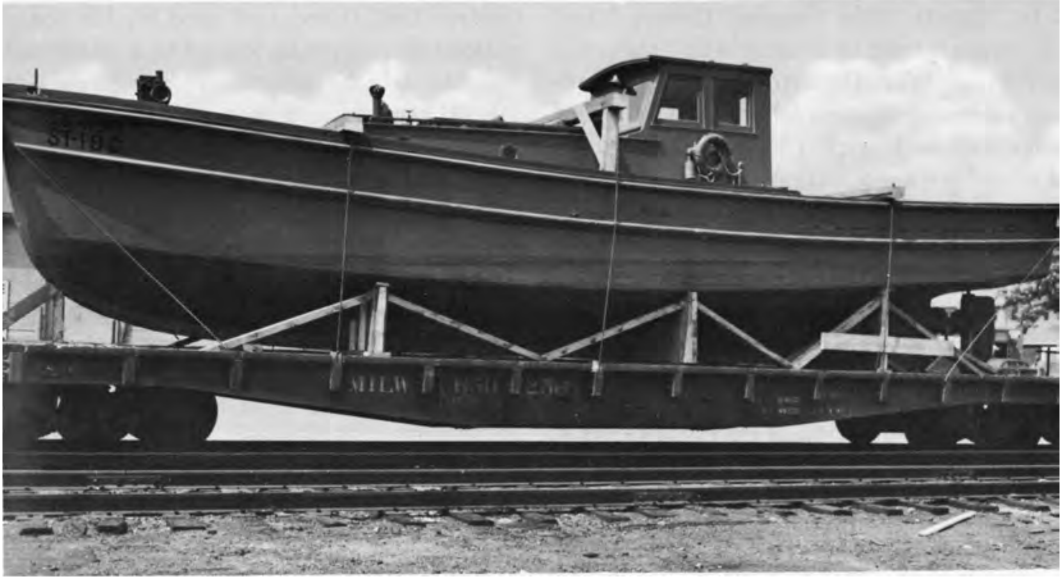
[171] OCT Cir Ltr 10, 17 Jun 42, sub: Cross-hauling Supplies and Materials; Memo, CG SOS for ACofS for Opns SOS and CG's of AAF, AGF, service commands, and supply services, 22 Oct 42, ASF Hq Trans 1941–42.

[172] WD Cir 12, Sec. VII, 7 Jan 43; WD Cir 177, Sec. IV, 3 Aug 43; Rpt, Transport Economics Sec Traf Contl Div OCT, Crosshauling and Back-hauling, Sep 42; Memo, CofT for ACofS for Matériel SOS, 12 Dec 42, sub: Cross-Hauling of WD Freight. Last two in OCT HB Traf Contl Div Freight.

[173] WD Cir 338, Sec. VII, 18 Aug 44.

[174] Memo of remarks by Maj W. P. Guiler at conf of zone and port trans officers, 23–25 Apr 45. For discussion of problems involved see First Group Mtg of Distribution Plng Bds, 21 Apr 43, and Proceedings of Second Group Mtg and Trans Conf of Tech Svs, 28 Mar 44, OCT HB Traf Contl Div Freight.

[175] For discussion of purpose and results of ODT General Orders 1 and 18, see *Civilian War Transport*, pp. 11–15.



THE BRACING AND LASHING OF LARGE EQUIPMENT *was carefully studied by the Transportation Corps and the railroads in order to facilitate handling and at the same time insure safe transit.*

ity.[176] Reports of light loading which reached the Chief of Transportation were referred to the zone transportation officers for investigation, and upon confirmation the facts were brought to the attention of the technical services and the local transportation officers concerned.[177] Studies were made by the Army and the railroads in order to improve the loading of artillery, vehicles, and other bulky and irregularly shaped equipment with a view to economy of space as well as safe transit. The large proportion of such equipment in military shipments, the absence of heavy bulk commodities such as constitute a substantial part of commercial freight, and the necessity which the Army often encountered of loading cars hastily in order to meet delivery schedules accounted for the fact that the average weight of Army carload freight was less than the general average.[178]

In keeping with the campaign to obtain full utilization of freight car capacity, an effort was made by the railroads to restrict the use of the several types of cars to the commodities for which they were best suited. The Army fully supported this undertaking. For example, Army transportation officers were instructed not to use flat cars and gondolas, for which there was a growing demand, if the freight could be loaded without great disadvantage in closed cars.[179] Certain types of box cars were especially suitable for the shipment of military vehicles and their use for other purposes was limited. The sizes of cars which would accommodate particular types of equipment with the least waste of space were determined for the guidance of officers in the field, and Army technical services and local transportation officers were taken to task by the Chief of Transportation when improper sizes were ordered.[180]

The heavy increase in passenger traffic and the small number of new cars added during the war necessitated various measures by the Office of Defense Transportation to insure economical utilization of equipment on hand. In October 1942 railroad passenger schedules were "frozen" and the carriers were restrained from running special trains or extra sections. The railroads' voluntary revision of existing schedules also released a considerable quantity of passenger equipment from services where it was not being used fully or to best advantage.[181] Early in 1945 the carriers were ordered by ODT to discontinue seasonal services to resort areas and were forbidden to operate passenger trains on which the occupancy of space had not averaged 35 percent. Soon after V-E Day the practices relating to the reservation of berths and seats were brought under control to prevent space being unoccupied at time of departure. And in July 1945 ODT took additional steps to withdraw sleeping cars from regular services in order that they might

[176] AR 55–155 par. 6, 27 Nov 42; Ltr, Traf Contl Div OCT to AAR, 27 Oct 43, OCT 080 AAR; Memo, CofT for QMG, 3 Apr 43, sub: Heavier Per Car Loading (similar letters to other technical services), OCT 505 QMG Heavier Loading.

[177] See 2d Ind, CofT to ZTO 5th Zone, 28 Jul 43, OCT HB Topic Traf Contl Div Freight.

[178] The Army average for carload freight improved from 24 tons in December 1941 to 28 tons in 1942, 29 tons in 1943, and 30 tons in 1944. See statistical table, Avg Tons per Car of Carload Freight, OCT HB Traf Contl Div Freight. The general average for 1944 was 40.3 tons.

[179] OCT Cir 29, 13 Jul 42; OCT Cir 63, 22 Oct 42.

[180] See 1st Ind, CofT for ZTO 3d Zone, 15 Feb 43, OCT HB Traf Contl Div Freight.

[181] See AAR press release, Chicago, 29 May 42, OCT HB Topic RR Gen Info.

be available for troops returning from overseas.[182]

The Army, on its part, utilized the passenger equipment employed for organized troop movements to practical capacity, requiring that three enlisted men be assigned to each sleeping car section, and three to each two coach seats when the journey did not exceed twenty-four hours.[183] Soon after Pearl Harbor, in order to insure that the correct equipment was ordered and that entrainments were accomplished without confusion and delay, troop units were instructed to have equipment requirements and entrainment plans ready at all times; also, entrainment exercises were encouraged, and investigations were made to determine that troop-loading facilities at military reservations were adequate.[184] In 1943 the Chief of Transportation sought and obtained authority to vary the dates or hours of departure shown in troop movement orders, except those for units destined overseas, when by so doing he could avoid the deadheading of cars or reduce the idle time of cars between movements, and he was able by this procedure to effect a very substantial improvement in the efficiency with which passenger equipment was used.[185]

There was persistent complaint, both official and unofficial, that the Army was wasting passenger equipment by unnecessary troop moves. Commissioner J. Monroe Johnson of the Interstate Commerce Commission referred to such complaints in a letter to General Somervell in October 1942, and while acknowledging that he did not have sufficient information upon which to base an opinion he requested that the subject be given consideration.[186] General Somervell replied that the matter had received careful attention and that every effort consistent with military necessity was being made to limit troop movements. Soon thereafter, in answer to an inquiry from the Assistant Secretary of War, Somervell expressed the view that such criticisms came from uninformed persons who did not understand the purpose of the movements and said that while he knew there was cross-hauling of troops he was not aware of any case which did not have proper justification.[187] Later, however, both Somervell and Gross were convinced that troop moves could be reduced by careful management, and the responsible officers of the Army were requested to give the matter close attention. Gross nevertheless pointed out the inconsistency of criticizing the Army on this score when pleasure travel by civilians was unrestricted.[188]

The endeavor to get maximum service out of railroad motive power and rolling stock was hindered in the early stages of the emergency by laws which existed in a few states—Arizona, Oklahoma, Louisiana, Texas—variously limiting the length and composition of freight and passenger

[182] *Civilian War Transport*, pp. 81–86.

[183] AR 55–130, par. 6b, 28 Dec 42. The Navy assigned only two enlisted men to a sleeping car section until July 1945 when an ODT order fixed three as the minimum.

[184] OCT HB Monograph 6, pp. 220–25, 233; Memo, TAG for CG's all Armies, *et al.*, 19 Dec 41, sub: Troop Movements Rail, AG 370.5 (12–18–41) MO–D–M; Memo, TAG for CG Field Forces, 24 Dec 41, AG 370.5 (9–10–41) (1) Sec 1.

[185] WD Cir 102, par. 2, 15 Apr 43; WD Cir 358, Sec. IV, 4 Sep 44; OCT HB Monograph 22, pp. 76–79.

[186] Ltr, Johnson to Somervell, 20 Oct 42; Ltr, Somervell to Johnson, 23 Oct 42. Both in OCT HB Gross Rail.

[187] Memo for John J. McCloy, 18 Nov 42, OCT HB Gross Rail.

[188] Ltr, Gross to ODT, 29 Jan 44, OCT 511 Rail and Motor Mvmts; Memo, Somervell for Gens Arnold, McNair, etc., 3 Jul 43; Ltr, Gross to AAR, 5 Aug 43. Last two in OCT HB Gross Day File.

trains.[189] Upon entering these states, trains which did not conform to the laws were detained and broken up, with resulting delay to the traffic and waste of car time. The Army was of the opinion that its traffic was not subject to state regulation and announced that it would disregard such restrictions whenever necessary in the interest of military expediency.[190] For the protection of the carriers in case of prosecution by state authorities, the responsible Army officers were directed to furnish the appropriate railroad representatives with certificates setting forth the necessity for the length and make-up of trains which contravened state laws. In September 1942 the Interstate Commerce Commission issued an order suspending for the period of the emergency all rules, regulations, practices, or laws affecting the length or composition of interstate trains. A suit brought against one of the railroads by the state of Arizona ended in an opinion by the Supreme Court of the United States, rendered in June 1945, that the Arizona law was unconstitutional as affecting interstate commerce.[191]

In May 1942 the Acting Secretary of War, writing to the majority leader in the House of Representatives, indicated that the Army so far had been able to avoid delay in the delivery of military personnel and supplies on account of state laws regulating the length and composition of trains, but pointed out that the full crew laws which existed in a number of western states were a potential source of difficulty.[192] As the manpower situation became more acute, the full crew laws did cause substantial delay in the movement of traffic since the railroads often had difficulty in completing crew complements.[193] Relief from this handicap was afforded only by the State of California, which in 1943 authorized suspension of the full crew law when necessary to meet war requirements.

Temporary Government Control of the Railroads

During a period of about three weeks, from 27 December 1943 to 18 January 1944, the railroads were in the possession and under the control of the federal government, and responsibility for their operation was vested in the Army Chief of Transportation. The seizure was ordered by the President after efforts to bring management and labor to agreement had failed.[194] Strikes had been called to commence on 30 December, and seizure was ordered as the sole remaining means of preventing an interruption of railroad operation that might have had disastrous effects on the nation's military effort, then at a critical stage, and on its civilian economy.

The President's executive order directed the Secretary of War to "manage and operate or arrange for the management and

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[189] See summary of state laws and federal actions in Ltr, Wm T. Faricy Pres AAR to C. C. Wardlow, 17 Jul 47, OCT HB Topic RR State Laws. Army Regulation which in peacetime limited length of mixed trains in interest of troop safety was rescinded in 1940 (AR 30–945, 1 June 23; WD Cir 130, Sec. II, 5 Nov 40). Texas law was amended in July 1941 to exempt military movements.

[190] Ltr, SW to Gov of Calif., 3 Jun 41, OSW C&R Railroads; DF, ACofS G–4 for TAG, 8 Dec 41 (G–4/14935–1), AG 511 AR 30–945.

[191] WD Cir 269, Sec. II, 26 Dec 41; ICC Service Order 85, 11 Sep 42; *Southern Pacific Company* v. *Arizona*, 325 U.S. 761.

[192] Ltr to Hon John W. McCormack, 7 May 42, OSW C&W Trans 501–800.

[193] Ltr, Wm T. Faricy Pres AAR to C. C. Wardlow, 17 Jul 47, OCT HB Topic RR State Laws.

[194] EO 9412, 27 Dec 43. For summary of events and procedures see ASF MPR, Sec. 3, Dec 43, pp. 2–3, and Jan 44, pp. 2–9.

operation of the carriers" in such manner as he deemed necessary "to assure to the fullest possible extent continuous and uninterrupted transportation service." The Secretary of War delegated his authority to the Commanding General, Army Service Forces, who in turn delegated responsibility for the operation of the railroads to the Chief of Transportation.[195] The notice of seizure sent to each railroad over the signature of the Secretary of War, following the issuance of the President's order, indicated that only the carriers' transportation facilities, as distinguished from their nontransportation property and assets, were being seized.

The fact that the seizure of the railroads and the assumption of control of their operations were accomplished with speed and smoothness was due in large part to the advance preparation of a complete plan for the undertaking.[196] Preparation of the plan was begun in the Office of the Chief of Transportation on 23 December, when the danger of breakdown in the negotiations to forestall the threatened strikes no longer could be ignored. Col. Luke W. Finlay, a lawyer by profession and executive to General Gross, and Col. Andrew F. McIntyre, a railroad executive by profession and chief of the Rail Division, took leading parts in the work of preparation, guided by Generals Somervell and Gross in matters of policy and aided by other elements of the Army and the railroad industry in matters of administrative and technical detail. The plan included drafts of thirty separate documents, including the President's executive order, delegations of authority by the Secretary of War and the commanding general of the Army Service Forces, public statements by the President and the Secretary of War, and orders defining the scope of the seizure, the Army's organization for the control of operations, the duties of the several elements of the Army which were involved, and the courses to be followed under indicated circumstances. The entire plan was approved by the President before his seizure order was issued.

The Chief of Transportation was aided in the fulfillment of his operating responsibilities by advisers drawn from the rail industry. Mr. Martin W. Clement, president of the Pennsylvania Railroad, was designated principal adviser.[197] Officials of the Association of American Railroads, including John J. Pelley, President, Charles H. Buford, Vice President in charge of operations, and Warren C. Kendall, Chairman of the Car Service Division, acted as expert consultants, and J. M. Hood of the American Short Line Railroad Association served in a similar capacity. Alvanley Johnston of the Brotherhood of Locomotive Engineers and A. F. Whitney of the Brotherhood of Railroad Trainmen served as consultants in labor relations. The Chief of Transportation also arranged for representatives of other government agencies which were large shippers, including the Navy, the Treasury Department, and the War Food Administration, to give assistance as needed.

The field organization established for the control of operations was headed by seven

[195] WD Opn of RR's Gen Order 1, by CG ASF, 27 Dec 43, OCT 004.01 RR's.

[196] Rpt, CG ASF to SW, 27 Dec 43, Plan for the Possession, Control, and Operations of the Railroads by the Army. Concerning preparation of plan see Ltr, L. W. Finlay to C. C. Wardlow, 3 Mar 49, OCT HB Rail Div Seizure of RR's 1943.

[197] Memo, CofT for C's of Divs OCT, 31 Dec 43, sub: WDORR (War Department Operation of the Railroads) Appointments, OCT HB Rail Div Seizure of RR's 1943.

regional directors. These directors, who had been executives of large railroads and were commissioned colonels for the period of their service in the Army, were as follows:

Region	*Director*	*Railroad*
Eastern	F. E. Williamson	New York Central
Allegheny	R. B. White	Baltimore & Ohio
Pocahontas	W. J. Jenks	Norfolk and Western
Southeastern	E. E. Norris	Southern
Central Western	Ralph Budd	Burlington
Northwestern	C. E. Denney	Northern Pacific
Southwestern	L. W. Baldwin	Missouri Pacific

Military personnel to staff the regional offices was provided from the organizations of the service commanders and the zone transportation officers. Commissioned officers were stationed at the principal offices of the railroads as representatives of the regional directors. The service commands were made responsible for the administration of the regional offices and for the security of the railroads and railroad property under Army control. Responsibility for the management and operation of the carriers, however, rested entirely with the Chief of Transportation and the regional directors who were responsible to him in such matters.[198]

The executive order provided that the Secretary of War should permit the management of seized railroads "to continue their respective managerial functions to the maximum degree possible" consistent with the purpose of the order. The Army's basic directive stated: "Whenever the co-operation of the carrier and its personnel is assured, the existing management and organization of the carrier will be utilized, and the carrier will continue operations in the usual and orderly course of business . . ."[199] As matters developed, the Army did not find it necessary to take a direct hand in the management and operation of any railroad. The strike notices were withdrawn by the several unions, some of them before the seizure took place.[200] Daily reports received by the Chief of Transportation from the regional officers indicated full co-operation by both management and labor.[201]

The President's order stated that, except when the order specified otherwise or the Secretary of War directed otherwise, the operation of the carriers should continue to be in conformity with the Interstate Commerce Act, the Railway Labor Act, other applicable federal and state laws, local ordinances, and rules and regulations issued in accordance with such laws and ordinances. It also provided that, except as otherwise ordered by the Secretary of War, all contracts and agreements to which the carriers were party should remain in full

[198] Memo, CG ASF for CG's of SvC's, 28 Dec 43, OCT 004.01 RR's.

[199] WD Operation of RR's Gen Order 1, 27 Dec 43, par. 5.

[200] Memo, C of Rail Div OCT for CofT, 30 Dec 43, OCT HB Gross Rail WD Opn; "Army Control Continues as Wage Settlements are Stalled," *Railway Age*, January 8, 1944.

[201] For digest of these rpts see daily Memos, C of Rail Div OCT for CofT, 29 Dec 43–19 Jan 44, OCT HB Gross Rail WD Opn.

force and effect. The Secretary of War was expressly authorized to prescribe the compensation to be received by employees of the railroads, subject to the applicable laws and regulations relating to economic stabilization. He was expressly directed to recognize the right of the workers to continue membership in labor organizations and to bargain collectively through representatives of their own choosing with the managements of the railroads. In accordance with these stipulations the Army scrupulously avoided interference in the relations between carriers, the relations between railroad management and labor organizations, and the relations between the industry and governmental agencies concerned therewith. The Interstate Commerce Commission and the Office of Defense Transportation were requested to continue to function in the usual manner, unless developments should force the Army to exercise its overriding authority, and similar requests were sent to regulatory bodies in the several states.[202]

Only four general orders relating to the railroads were issued by the Army. The first, referred to above, gave operational effect to the President's directive regarding seizure of the carriers. The second and third gave effect to wage agreements concluded between the carriers and certain of the unions during the period of government possession. The fourth specified the form of ratification and release to be obtained from the individual carriers on termination of government possession.[203] The latter order was issued on 18 January 1944, after notification had been received from the President that the last of the labor unions had reached agreement with the carriers and that the agreement had been approved by the Director of Economic Stabilization.[204] Return of the railroads to the possession and control of their owners was begun the same day, releases being taken from each carrier to protect the government against claims.

Although they proved to be unnecessary, the Army made extensive preparations for the continued operation of the railroads in case the workers should strike.[205] The service commands were directed to make inventories of troop strength and motor equipment under their control or available from the Army Ground Forces. Each post commander was directed to report the number of enlisted men with specified skills assigned to him. The actual strength of activated units of the Military Railway Service undergoing training in the zone of interior and the extent of their training were determined, and the units were alerted for change of station. It was contemplated that, if the necessity should arise, all Army personnel available would be organized into provisional military railway units, to function under the command of the Chief of Transportation. Since it was anticipated that widespread strikes would necessitate a sharp curtailment of railroad service, priorities were established for the movement of troops and supplies.

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202 Memo, CofT for CG ASF, 28 Dec 43, ASF Hq RR's.

203 Ltr, Julius H. Amberg Sp Asst to SW to George Meader Asst Counsel to Senate Special Committee Investigating the National Defense Program, 20 Jan 44, OCT 004.01 RR's.

204 Ltr, the President to SW, 18 Jan 44, ASF Hq RR's.

205 Rpt, Plan for the Possession, Control, and Operation of the Railroads by the Army, 27 Dec 43, tabs G, H, I, J, X, Z, BB, DD (Situation II); Memo, CG ASF for CG's SvC's, 28 Dec 43, OCT HB Rail Div Seizure of RR's 1943; Memo, C of Legal Div OCT for Exec OCT, 4 Jan 44, sub: Tel Conv, OCT 322 RR's; Memo, C of Traf Contl Div OCT for Exec OCT, 4 Jan 44, sub: Priorities, OCT 523.07 RR's.

The effect of the government's seizure of the railroads was to remove the immediate threat of strikes, and that threat did not recur during the war. The Army's handling of its responsibilities during the seizure met with general approval. The Association of American Railroads informed President Roosevelt that the facility with which the Army had assumed control and eventually relinquished it, and the smoothness of operation during the period of possession, "had called forth universal commendation." [206] The Office of Defense Transportation thought the Chief of Transportation had "handled the difficult and delicate task exceedingly well." [207] Some of the railroad labor unions expressed satisfaction over the Army's role in reopening the conferences which led to final agreements between the unions and the carriers.[208] A leading publication for the railroad industry, expressing satisfaction with the self-restraint displayed by the Army in the exercise of the great authority which had been given it, said: "It moved in far enough to secure the necessary contacts within the industry to enable it to act swiftly in the event that untoward occurrences should make necessary the use of military force, but it stopped short of any interference whatsoever with operations." [209]

The Highway Carriers

Highway transportation in the United States came to maturity between the first and the second world wars. This fact was reflected in the great increase in the number of commercial and private motor vehicles in use and the improvement in the extent and quality of the highways.[210] Also during this period motor vehicles became an essential part of the Army's organic equipment. Consequently as the Army grew in strength during 1940 and 1941 and undertook more extensive training and field exercises, it was confronted with the dual problem of making more systematic use of the commercial highway carriers and of improving arrangements for over-the-road movements of its own vehicles. The first-mentioned aspect is the one with which this section is concerned primarily. With regard to the latter, it will suffice to say that in 1940 the War Department was well aware of the need for developing better techniques for controlling the movement of military motor convoys and co-ordinating such movements with the civilian authorities, and that the Transportation Branch of G–4 did extensive spade work in that field.[211]

Despite the growth of the highway transportation industry, the Army made little use of commercial motor carriers prior to 1941. An Army regulation, adopted before motor carriers handling interstate traffic were brought under the regulation of the Interstate Commerce Commission by the Motor Carrier Act of 1935, required that truck services be obtained "by means of an

[206] Ltr, 19 Jan 44, OCT HB Gross Rail WD Opn.

[207] Ltr, V. V. Boatner to Gen Gross, 19 Jan 44, Gross Day File.

[208] Joint Ltr, Pres Brotherhood of Locomotive Firemen and Enginemen, Pres Order of Railway Conductors, Pres Switchmen's Union of North America to Gen Somervell, 4 Feb 44, ASF Hq RR's.

[209] "Salute to the Army," *Railway Age*, 29 January 1944.

[210] Between 1920 and 1940 registered automobiles and buses increased from 8,226,000 to 27,435,000 and trucks from 1,006,000 to 4,590,000. Automobile Manufacturers Association, *Automobile Facts and Figures* (Detroit, 1943), p. 48. In 1920 common carrier bus and truck services were in their infancy.

[211] Memo, G–4 WDGS for CofS USA, 9 Jul 40, sub: Army Trans, G–4/31344–1; Ltr, SW to Sen Sherman Minton, 21 Oct 40, G–4/32120; WD Tng Cir 11, 1 Mar 41; OCT HB Monograph 3, pp. 43–45.

agreement," and prohibited the use of the standard government bill of lading for such shipments.[212] The negotiation of an agreement or contract for each shipment, although it afforded means of assuring reasonable charges and of otherwise protecting the government's interests, was a slow and cumbersome procedure that virtually constituted a prohibition against the day-to-day use of commercial trucks for the movement of Army freight. Nevertheless, the Army, "for cogent reasons" which will be explained below, continued to prescribe this procedure until September 1940. Then concurrently with the passage of the Transportation Act of 1940, which tightened federal control over the motor carriers and made it clear that the procurement of motor transportation was not governed by the statutory requirement that the procurement of supplies and services be preceded by advertising for bids, the use of government bills of lading in shipping public property by commercial trucks was authorized.[213]

The use of commercial buses for Army personnel was severely restricted up to mid-1941 by reason of a clause in the Joint Military Passenger Agreement, negotiated annually between the armed services and the rail and domestic water carriers, which provided that bus lines (also the airlines) would not be considered in routing military passengers except in cases where the services of the rail and water carriers were "inadequate to meet the military necessities." [214] In the strict enforcement of this provision local Army transportation officers sometimes made routings by rail which were impractical, and as a result considerable criticism was directed at the Army. Consequently, in the Joint Military Passenger Agreement which became effective 1 July 1941, this clause was changed to provide that other available commercial transportation agencies could be used when, in the judgment of the officers arranging the transportation, they could "provide more satisfactory service to meet the military requirements" than could the rail and water carriers.[215]

The limited use which the Army made of commercial motor trucks and buses during the early part of the emergency must be viewed in the light of certain conditions peculiar to the industry. Of a total of approximately 4,600,000 registered trucks, less than 15 percent were engaged in service for revenue.[216] Out of something less than 150,000 registered motor buses, more than 90,000 were used for school purposes.[217] Common and contract carrier trucks and buses were distributed among a large number of owners and operators, many of whom controlled only a few vehicles. Although the members of the American Trucking Associations and the National Association of Motor Bus Operators collectively controlled a large percentage of this equipment, these

[212] AR 30–905, par. 11, 1 Aug 29.

[213] Memo, QMG for TAG, 3 Sep 40, sub: Trans of Public Property by Highway Freight Carriers, OCT 552.02 (AR 30–950); WD Cir 108, Sec. I, 30 Sep 40.

[214] JMPA 17, effective to 30 June 41. These agreements gave reduced rates and other advantages to the armed services, as well as advantages to the rail and water carriers.

[215] JMPA 18, Sec. 6, par. (3), OCT HB Topic Mil Passenger Agreements. For discussion of circumstances leading to change in agreement see OCT HB Monograph 6, pp. 183–93.

[216] Senate Special Committee Investigating the National Defense Program, *Third Annual Report*, p. 427, indicated that in January 1943 there were 170,000 intercity common carrier trucks, 120,000 local common carrier trucks, 365,000 contract carrier trucks, the remainder being in agricultural, private business, or government services.

[217] *Automobile Facts and Figures*, p. 46; Eastman, *Selected Papers*, p. 235, address delivered 25 Feb. 43.

associations, unlike the Association of American Railroads, had no authority over the distribution and utilization of the vehicles and were dependent on negotiations with the several operators when endeavoring to assemble equipment for a special movement. The operators themselves were limited in the utilization of their equipment to routes specified in the certificates issued to them by the Interstate Commerce Commission and state regulatory bodies.

At this period interstate motor operators were considerably handicapped by variations in state laws and regulations relating to motor vehicles, particularly those limiting the sizes and weights of vehicles permitted to use the highways.[218] Trucks and buses frequently were stopped at state borders, were detained by formalities incident to enforcement of the laws of the states into which they were entering, and sometimes were required to transship their cargoes or passengers. The more severe state limitations on sizes and weights were ostensibly dictated by highway and bridge capacities, but Army and other engineers found some of the limitations unnecessarily low and unjustifiable in wartime. The Interstate Commerce Commission, in accordance with directions contained in the Transportation Act of 1940, made a thorough study of this subject and in the summer of 1941 recommended legislation to ameliorate the hardship, but the recommendation was not followed by Congress.[219] Later, after the United States had entered the war, the Army took the position that these state restrictions would have to give way "before the over-ruling necessity of prosecuting the war," and arranged for its local transportation officers, with the assistance of local representatives of the Interstate Commerce Commission, to obtain waivers from the state authorities in favor of specific shipments.[220] Also, some relaxation of state laws and regulations was worked out through the Council of State Governments.[221]

As early as the fall of 1940 the Army foresaw that it would need the active cooperation of state and federal highway authorities and took steps to secure such support. Its endeavor resulted some months later in the activation of a Highway Traffic Advisory Committee to the War Department, with Thomas H. MacDonald, Commissioner, Public Roads Administration, as chairman, and in the establishment of State Highway Traffic Advisory Committees consisting of officials designated by the respective governors.[222] A year of experience with these committees proved them very helpful instruments in dealing with matters which were under the control of civilian authorities, and they continued to function

[218] For analyses of restrictions see press release of American Trucking Associations, sub: Summary of Testimony Submitted to the Temporary National Economic Committee at hearings on Interstate Trade Barriers, 20 Mar 40; Ltr, Natl Assn of Motor Bus Operators to C. C. Wardlow, 18 Mar 41, and inclosed statement, sub: Interstate Trade Barriers, For Hire Trans of Persons. All in OCT HB Topic Hwy Trans Gen.

[219] Eastman, *Selected Papers*, p. 58.

[220] OCT HB Monograph 6, pp. 144–46; Ltr, SW to Chm ICC, 21 Jun 42, OSW C&R Trans 501–800.

[221] WD Cir 190, 15 Jun 42; WD Coml Traf Bull 27, 24 Aug 44, OCT HB Topic Hwy Trans Gen. For general discussion see *Civilian War Transport*, pp. 143–47.

[222] Memo, ACofS G–4 for CofS USA, 26 Nov 40, G–4/32212; Ltr, SW to MacDonald, 6 Dec 40, G–4/32212; WD press release, 9 Mar 41, sub: Regional Sessions of State Traffic Committees, OCT HB Topic HTAC.

throughout the war.[223] Originally their purpose was to assist in the planning and execution of military movements so as to minimize conflict with civilian traffic, to aid in the completion of a nation-wide inventory of motor vehicles to facilitate their mobilization should they be required for military purposes or for civilian evacuation, to provide information from civilian driver records regarding men under consideration for assignment as military motor vehicle operators, and to assist the commanders of Army installations with their local traffic problems. Later the state committees were requested to assist in establishing adequate transportation arrangements for workers in war industries, in expediting the movement of important shipments in which the Army was interested, in improving the highways, and in overcoming the hardships imposed by unduly restrictive state laws and regulations.[224]

After the change of regulation in September 1940 that permitted the use of government bills of lading for shipments by motor truck, the Commercial Traffic Branch in the Office of the Quartermaster General set up a special section to deal with highway traffic and undertook a comprehensive survey of available truck services and the accumulation of a complete set of truck tariffs. As experience with highway shipments accumulated, however, a variety of conditions, in addition to those mentioned above, were found to militate against the rapid expansion of motor freight.[225] After shipments had been routed by truck it frequently developed that the carriers could not accept them because of limited capacity and other commitments. It was difficult to ascertain what space would be available to the Army on a specific route at a specific time. It was difficult to ascertain from the great number of large and small truck operators what limitations as to routes and commodities had been placed on them by federal and state regulatory bodies. There were types of Army matériel which because of size or character could not be loaded in trucks advantageously. Although in the summer of 1941 the motor carriers were invited to equalize their rates with the land grant rates of competing railroads, this required an agreement between the War Department and each operator; since many operators found the Army's business unprofitable at the reduced rates, they either declined to sign equalization agreements or desired to be released after signing.[226]

Despite these conditions, shipments by truck became more frequent as the Army's traffic expanded. The Commercial Traffic Branch routed approximately 400 truckloads during the first quarter of 1941, 1,600 truckloads during the second quarter, and 3,100 truckloads during the third quarter.[227] Transportation officers in the field were authorized to route shipments of less than two truckloads without reference to the Commercial Traffic Branch, and though there is no comprehensive record of the volume of that traffic the records of the several installations indicate that it increased during this period. The transportation officers in the field were urged to use the highway

[223] Ltr, SW to Thomas H. MacDonald, 10 Mar 42, AG 334 HTAC (2-9-42).

[224] Memo, CofT for Thomas H. MacDonald, 12 Mar 43, AG 334 HTAC (2-9-42).

[225] Memo, C of Coml Traf Br for C of Trans Div OQMG, 24 Jun 41, sub: Gen Use of Motor Carriers; Draft of press release prepared in Coml Traf Br, 6 Aug 41; Statement by Maj E. C. R. Lasher, C of Coml Traf Br, prepared November 1941, sub: WD and Motor Carrier Industry. All in OCT HB OQMG Coml Traf Br.

[226] OCT HB Monograph 6, pp. 158-60.

[227] Statement by Lasher cited n. 225.

carriers in lieu of railway express for shipment of less than 400 miles, in order to take advantage of the expeditious service and avoid the premium rates charged for railway express.[228]

The Army also encountered limiting factors in the extension of its use of commercial buses. Here again the capacity of the individual carriers was limited, and their operations were restricted to authorized routes. They did not provide satisfactory messing, sleeping, and sanitary facilities for mass movements, nor were they equipped to handle the impedimenta of troop units. Because of these circumstances, the bus operators were not in a position to bid on all or the major portion of the traffic of the armed services, as were the railroads. Nevertheless, the advantages which the bus services offered for certain types of military traffic were recognized, as evidenced by the abovementioned change in the Joint Military Passenger Agreement, effective 1 July 1941. Concurrently the Army's instructions were altered, removing the requirement that bus travel be limited to trips not exceeding six hours and specifying only that the travel from point of origin to destination should be between 6:00 A.M. and the following midnight.[229] The effect of these changes was soon apparent in the number of Army passengers moved by bus, particularly those routed by transportation officers at field installations who were authorized to route groups of less than fifty.[230]

In addition to developing its regular traffic by highway, the Army during 1940–41 endeavored to establish by actual experience the extent to which commercial motor bus and truck equipment could be utilized in organic troop movements. In October 1940 the motor carriers were requested to submit a plan for the movement of the 106th Cavalry, a National Guard unit embracing 1,193 men and 472 horses, with a limited amount of motor equipment, from three points in Illinois and Michigan to a maneuver area near Alexandria, La. A satisfactory plan was not worked out by the motor carriers and the project was dropped.[231] The first such movement actually carried out was in January 1941, when the 153d Infantry Regiment, Arkansas National Guard, was transported from fifteen armories to Camp Robinson, over distances ranging from 24 to 200 miles, by 31 buses and 21 trucks. Since this was a nonmechanized unit of 1,457 men, with only about 200 tons of baggage and other impedimenta, and the routes were entirely within one state, the carriers were not severely tested.[232] Accordingly it was proposed to use motor transport for the movement of a division to an August maneuver, on a trip that would cross state borders and involve problems of bivouac, sleeping, and messing en route. This undertaking had to be postponed, however, because GHQ, to which the task of preparing a movement plan had been assigned, reported that sufficient trucks and buses could not be obtained in the respective

[228] OQMG Cir Ltr 186, 1 Aug 41, OCT HB OQMG Coml Traf Br.

[229] OQMG Cir Ltr 103, 5 Jun 41, and Supp. 1, 26 Jun 41, OCT HB Topic Mil Passenger Agreements.

[230] Statement based on general information. Actual data for bus routings in 1941 are available only for groups routed by the Commercial Traffic Branch, OQMG. OCT HB Monograph 6, p. 409.

[231] 1st Ind, QMG to TAG, 28 Jan 41, G–4/25958–31.

[232] Memo, Capt C. R. Weaver (G–4 Observer) for Gen Reybold ACofS G–4, 8 Jan 41; Memo, ACofS G–4 for CofS USA, 23 Jan 41, sub: Utilization of Van and Bus Sv. Both in AG 511.1 (10–9–40) (1) Mvmt of Org by Bus and Motor Van.

areas to move any division of the Third or Fourth Armies.[233]

A substitute plan then was initiated for moving a division of the First Army by motor. This project was carried out in September 1941 with the 28th Division. At that time 2,462 troops with their impedimenta were transported in 143 commercial vehicles from Indiantown Gap, Pa., to a maneuver area near Lisleville, N. C.; the remainder of the division was transported in organic vehicles. The trip of 530 miles began on the evening of 24 September and ended at midnight on 28 September. Three overnight bivouacs were made, and there were stops during the daytime for messing the troops and for resting.[234] The general plan for the use of commercial vehicles was worked out between the Commercial Traffic Branch, the American Trucking Associations, and the National Association of Motor Bus Operators, but the assignment of vehicles and the control of their movements were arranged between the transportation officer of the 28th Division and the individual carriers.

While the two organic movements which were executed by motor were successful in many respects, they emphasized the problems already mentioned and called attention to others. The necessity of dealing with two groups of carriers—bus operators and truck operators—presented certain disadvantages. More time was consumed in obtaining the required amount of motor equipment by negotiation with several operators than would have been needed to mobilize an equivalent amount of rail equipment. In the case of the 28th Division, the troops were longer en route than would have been the case if rail had been used, and they were more fatigued on arrival at destination. It was apparent that both military personnel and civilian drivers required special training for the proper execution of movements of this type. The charges for motor transportation, which were based on special contracts between the Army and the carriers, were greater than the rail charges would have been.[235]

During the years 1940 and 1941 the cooperation between The Quartermaster General's Transportation Division on the one hand and the National Association of Motor Bus Operators and the American Trucking Associations on the other became progressively more active. Although these organizations did not represent all the commercial operators in their respective fields, they exercised a wide influence and they were naturally desirous of stimulating expansion of the Army's highway traffic and of aiding in the removal of the obstacles to such expansion. Mr. Arthur M. Hill, President of NAMBO, and Mr. Ted V. Rodgers, President of ATA, were members of the Transportation Advisory Group which The Quartermaster General appointed in January 1941, and they also worked closely with the Commercial Traffic Branch.

After the United States entered the war the increase in the Army's use of motor carriers was accelerated. No further attempt was made to employ commercial trucks and buses in organic movements, since the vehicles were of great value to the war effort in their regular services and because the expanding output of military trucks made it possible to assign more organic

[233] Memo, ACofS G–4 for CofS USA, 24 Apr 41; Memo, ACofS G–4 for TAG, 4 Sep 41, with note "for record only." Both in G–4/25958–31.

[234] See draft of article prepared in Coml Traf Br, 3 Nov 41, sub: Troops Moved by Bus and Truck, OCT HB OQMG Coml Traf Br.

[235] For fuller discussion see OCT HB Monograph 6, pp. 196–204.

motor equipment to troop units in training. But the wider utilization of the highway carriers in the day-to-day movement of personnel and matériel was encouraged for two basic reasons. First, it was desired to take full advantage of the greater flexibility of motor transportation that arose from the fact that the operators were not limited to fixed terminals, and of the more expeditious delivery on the shorter routes. Secondly, there was an obvious advantage in relieving the hard-pressed railroads of traffic which could be handled equally well by the highway carriers. Although cost generally was a paramount consideration in determining the type of transportation to be used for particular shipments, that consideration sometimes was subordinated to military expediency with regard to movements for which motor transport was especially well suited.[236]

The volume of Army freight moved by commercial motor trucks increased from 44,000 short tons in December 1941 to 1,068,000 tons in June 1945 and totaled over 26,000,000 tons during the 45 war months.[237] The Traffic Control Division in the Office of the Chief of Transportation, which took over the responsibilities of The Quartermaster General's Commercial Traffic Branch in March 1942, continually emphasized the desirability of using trucks for small shipments and short hauls and for speedy deliveries.[238] It opposed a plan which was put forward in the summer of 1942 to limit all truck hauls to 300 miles, but maintained the general policy that Army shipments for greater distances should be routed by truck only when there was some special advantage in so doing.[239] An analysis of truck traffic during the first half of 1944 revealed that 52 percent of the total tonnage had been shipped to points within the states where the shipments originated.[240] Contract motor carriers were used when common carriers were not available, provided that reasonable contract rates could be arranged.

Complete data on Army passengers moved by commercial buses are available only through May 1943. The number of such passengers increased from 17,905 in December 1941 to a monthly average of about 200,000 in 1942 and an average of about 290,000 during the first five months of 1943.[241] The Traffic Control Division in the Office of the Chief of Transportation routed 7.3 percent of the 1942 total and 5.8 percent of the total for the first five months of 1943.[242] As indicated above, the Traffic Control Division routed only the larger groups, which for the most part traveled the longer distances, and for such movements rail transportation was preferred. Most of the Army's bus traffic consisted of the smaller groups routed by field installations, and such groups usually traveled only short distances. An analysis of military and other tax exempt tickets sold by 35 Class I intercity bus operators during a period of

[236] Memo, C of Traf Contl Div OCT for CofT, 22 Jun 43, sub: Rate Differentials Presently Maintained by Rail and Motor Carriers, OCT 500 (AR 55-105).

[237] ASF, Statistical Review, World War II, p. 115.

[238] See remarks of Lt Col Richard M. Boyd, C of Freight Br Traf Contl Div OCT, Port and Zone Conf, Chicago, 6-9 Jul 44, session of 7 Jul, pp. 26-31, OCT HB PE Gen Port Comdrs Conf; see also WD TM 55-205, Transportation in the Zone of Interior, par. 34, 25 Aug 44.

[239] Remarks by Col W. J. Williamson, C of Traf Contl Div OCT, ZTO's Conf, 24-26 Sep 43, p. 67, OCT HB Zones Gen.

[240] Study by Transport Economics Br Traf Contl Div OCT, 4 Aug 44, sub: Growth of WD Freight, Motor, OCT HB Traf Contl Div/Freight.

[241] OCT HB Monograph 20, App. I.

[242] Based on a comparison of data in OCT HB Monograph 20, App. I, and Monograph 22, App. I.

MOTOR TRANSPORT FOR SHORT HAULS. *Commercial buses were used extensively for transporting selectees to induction stations (top). Trucks delivering freight to the Army consolidating station at Chicago (bottom).*

two weeks in December 1942 disclosed that 73.1 percent of such passengers traveled 25 miles or less and only 11.6 percent traveled over 100 miles.[243] The average distance traveled by all passengers on the lines studied was 52.2 miles.

In addition to the above-mentioned National Association of Motor Bus Operators which had its headquarters in Washington, two organizations of bus operators maintained headquarters in Chicago. They were the National Bus Traffic Association and the National Bus Military Bureau, whose functions roughly paralleled those of the territorial passenger associations of the railroads and the Military Transportation Section of the Association of American Railroads. These agencies did not represent all the bus operators, however, and their authority was limited.[244] The nature and extent of the military traffic by commercial bus did not require organizations in that branch of the transportation industry with scope and authority equal to that of the organizations which represented the traffic and operating interests of the railroads, but at times the officers responsible for Army transportation felt that stronger integration among the bus operators would have been helpful.

The commercial motor carriers, unlike the railroads, had no surplus equipment when the emergency came, yet like the railroads they were able to obtain only a limited amount of new equipment during the war. The wartime expansion of their traffic would have been far greater than it was except for this limiting factor. The production of trucks and tractors for civilian use was discontinued by the War Production Board within a few months after Pearl Harbor—light trucks on 31 December 1941, medium trucks on 28 February 1942, and heavy trucks on 31 March 1942.[245] Resumption of production was not authorized until May 1943 and then on a very limited basis. The production of buses for common carrier use was continued throughout the war at a substantial rate, since they were needed to supplement the railroads and private automobiles in local and intercity services, but the number of new vehicles made available fell far short of the number that could have been used to advantage.[246] The output of buses and trucks during the years immediately preceding the war and during the war years is shown in Table 12.

The limitation on the production of new motor vehicles for commercial services resulted, of course, from the enormous competing requirements for raw materials for military supplies and equipment, including the trucks needed by our own forces and by our allies.[247] The year 1943 marked the low point in the output of civilian vehicles. In July of that year the Director of Defense Transportation forwarded to the Secretary of War and the Chief of Transportation a

[243] The National Association of Motor Bus Operators, *The Intercity Bus Industry at War* (Washington, April 1943), pp. 9, 12, Table VII. This publication states that on 30 Nov 42 there were about 21,480 buses of all classes operating in intercity service, with about 630,000 seats.

[244] See OCT HB Monograph 6, pp. 102, 203.

[245] Rpt, Bureau of Transport Economics and Statistics ICC, Motor Carrier Facilities—War Use and Postwar Needs, Jun 46, p. 1.

[246] *Ibid.*, p. 4. Substitutes for scarce materials were used in constructing buses for wartime service, and also for the special troop sleepers built by the government, but the extensive use of substitutes in building long-lived passenger cars was not favored by the railroads.

[247] Output of unarmored trucks for the armed services, mostly Army and including lend-lease, was 186,462 in 1941, 647,342 in 1942, 648,404 in 1943, and 620,532 in 1944. See Civilian Production Adm, Munitions Production of the United States, 1 May 47, p. 233, OCT HB Topic WPB.

TABLE 12—PRODUCTION OF NONMILITARY TRUCKS, TRAILERS, AND BUSES IN THE UNITED STATES: 1936–1944

(Number of Vehicles)

Type of Vehicle	Yearly Average 1936–1940	1941	1942	1943	1944
Total	708,519	831,166	138,272	6,649	125,331
Trucks and Trailers	701,290	823,205	125,294	2,888	119,081
Heavy	34,039	47,371	15,795	2,709	31,091
Medium	354,017	408,367	86,072	179	87,990
Light	313,234	367,467	23,427	0	0
Buses	7,229	7,961	12,978	3,761	6,250
Intercity	2,325	2,088	3,968	1,691	1,927
City	4,904	5,873	9,010	2,070	4,323

Source: Motor Carrier Facilities—War Use and Postwar Needs, prepared by Bureau of Transport Economics and Statistics, Interstate Commerce Commission, June 1946, pp. 2, 4. These data agree in some instances and disagree in others with data given by ODT in *Civilian War Transport,* p. 125.

statement setting forth the seriousness of the motor carriers' situation, which he believed was not fully understood.[248] In his response General Gross concurred in the ODT view regarding the importance of the motor carriers in the war effort, and shortly thereafter recommended that the Army support the ODT truck production program for 1944, which his office had studied and found reasonable.[249] But although the Army trimmed its motor vehicle requirements for military and lend-lease purposes in order that the output of vehicles for civilian operators might be increased, the cut was not sufficient to enable the ODT program to be fully realized.[250] Neither General Somervell nor his Assistant Chief of Staff for Matériel, Maj. Gen. Lucius D. Clay, could fully accept the point of view of the Chief of Transportation, military operational plans being as they were.[251] General Clay pointed out that some of the trucks included in the ODT program were not types that would aid the Army or the war industries in the solution of their transportation problems; he doubted that the situation was as critical

[248] Ltr, 13 Jul 43, AG 537 (13 Jul 43) (1).

[249] Ltr, Gross to ODT, 24 Jul 43, OCT 537 Domestic Motor Transport; Memo, Gross for ACofS for Matériel ASF HQ, 30 Jul 43, OCT 451.2 Truck Prod Program.

[250] Senate Special Committee Investigating the National Defense Program, *Third Annual Report,* p. 112. The committee refrained from requesting reduction of the military truck program but recommended that the Army "subject its estimates to the most rigorous scrutiny" to make certain that they were not excessive. *Ibid.*, p. 432.

[251] Memo, Clay for Somervell, 13 Feb 44; Memo, Somervell for USW, 13 Feb 44. Both in ASF Hq Trans 1944.

as some believed, but indicated that if a crisis should occur in domestic motor transportation the over-all production capacity was so great that the deficiency could be made up quickly.

Collateral to the problem of getting additional equipment was that of getting the gasoline, tires, and replacement parts needed to keep the available equipment in full operation. Here again it was basically a matter of balancing military against civilian needs, and here again the military took precedence and civilian supplies were limited to the minimum with which the industry could carry on. The most troublesome shortage was that of replacement parts, and many vehicles had to be deadlined because of inability to procure the required items promptly. The Senate Special Committee Investigating the National Defense Program concluded that sufficient foresight had not been used by the government agencies concerned in setting up a balanced program of replacement parts for the highway carriers, whose maintenance requirements were heavy because of their intensive operations and the employment of many vehicles which under normal circumstances would have been retired.[252]

The Office of Defense Transportation represented the interests of the civilian motor carriers before the War Production Board, the Petroleum Administrator for War, and the Rubber Director and was also responsible for rationing within the industry.[253] The Army Chief of Transportation, however, kept these matters under close observation, made constructive proposals to protect the carriers' interests, and took such steps as he considered feasible to assist individual operators to obtain the vehicles, gasoline, and tires which they needed and to meet their difficult maintenance problems. This assistance was given first in the field, where the highway officers in the transportation zones were in constant touch with the operators and the local representatives of ODT. Problems not solved in the field were referred to the Chief of Transportation, whose Highway Division pursued them further, working through appropriate Army liaison officers with ODT and the other federal agencies concerned.[254]

Manpower was considered the most acute problem by many of the highway carriers. In order to keep their vehicles in operating condition, skilled maintenance mechanics were needed. In order to provide efficient and safe service on the highways, competent drivers were required. These employees of the motor carriers were on the average younger than the skilled workers on the railroads and somewhat less firmly attached to their employers by tradition and sentiment. Their skills were greatly sought by other booming war industries which were in a position to offer higher compensation. The draft took its inevitable toll despite the provision for deferment of indispensable employees. The carriers' plea that sufficient time be allowed to train replacements before experienced workmen were inducted often was disregarded by local draft boards. With manpower, as with equipment shortages, the Office of Defense Transportation was the agency responsible for finding solutions insofar as solutions were possible. The

[252] Senate Special Committee Investigating the National Defense Program, *Third Annual Report*, pp. 427–29.

[253] *Civilian War Transport*, pp. 200–12, gives a general account of ODT's difficulties and accomplishments.

[254] OCT Office Order 25–6, 29 Jan 43; Memo, Hwy Div OCT for Exec Asst OCT, 18 Jan 45, pp. 6–8, sub: Liaison with Other Govt Agencies; Annual Rpt Hwy Div FY 1945, p. 14. Last two in OCT HB Hwy Div Rpts.

Chief of Transportation, through his highway officers in the transportation zones, aided the operators in finding replacements for employees who had left their service and supported their requests for deferment when they were considered justifiable.

Many operating controls were imposed on the motor carriers by the Office of Defense Transportation with a view to conserving equipment and insuring maximum utilization of its capacity.[255] Through the issuance of certificates of war necessity, ODT endeavored to insure that commercial vehicles were employed on the routes where they were most needed and also to provide a sanction for use in enforcing its operating regulations. Through orders promulgated from time to time, ODT undertook to control such wasteful practices as underloading, circuitous routing, special deliveries, and duplicating services.[256] A limit of thirty-five miles per hour was placed on over-the-road driving on the theory that this would aid in the conservation of rubber and gasoline. Provision was made for both general and special exemptions from these regulations when circumstances warranted. Extensive exemptions were granted in favor of Army freight traffic and also that of the Navy, the Maritime Commission, and the War Shipping Administration.[257]

The number of trucks and tractor-trailer combinations registered in the United States decreased slightly between 1940 and 1944.[258] This decrease was the result of the limited number of new vehicles made available to the industry and the necessary retirement of old vehicles. Although a valiant effort was made to keep old vehicles in operation, abnormal attrition and inadequate maintenance took a heavy toll. The registration of commercial buses, on the other hand, increased about 50 percent between 1940 and 1944, the number produced being considerably in excess of the number that had to be retired.

The highway freight carriers were involved in numerous strikes. Fortunately most of them were local in scope and of brief duration. If the carriers involved in labor disputes served Army installations or war industries which were producing Transportation Corps equipment, the highway officers in the transportation zones endeavored by informal means to bring the parties to an understanding and encouraged the public agencies expressly charged with handling such disputes to perform their functions promptly. Where strikes were in progress, the zone officers took the steps necessary to insure that essential Army matériel was moved without delay. Labor relations in the field were under the supervision of the Industrial Personnel Division in the Office of the Chief of Transportation, which also maintained active liaison with the headquarters of the other federal agencies concerned and with the appropriate labor or-

[255] For discussion of regulatory measures see *Civilian War Transport,* pp. 102–30, 149–56, 161–64.

[256] A study of selected Class I common carrier trucks showed that the average load (tons) increased 30.4 percent between 1941 and 1944; a study of Class I intercity buses showed that the average load (passengers) increased 46.5 percent between these years. See Rpt, by Bureau of Transport Economics and Statistics ICC, Motor Carrier Facilities—War Use and Postwar Needs, Jun 46, pp. 14, 17.

[257] See CofT, Direction for Use of Certificate of Exemption and V-Emergency Pennants: also, Revised Procedure Concerning ODT Certificates of Exemption and V-Emergency Pennants, 1 Mar 43, source not indicated but apparently issued in connection with ODT Exemption Order 23–2A, 3 Mar 43. Both in OCT HB Topic Hwy Trans Gen.

[258] P. 7 of report cited in n. 256 shows 1943 registration as 98 percent of 1940, and 1944 registration as 98.4 percent of 1940. Data include private as well as commercial vehicles.

ganization headquarters in Washington.[259] A brief review of actions taken by representatives of the Chief of Transportation in connection with two strikes that were of special significance will serve to illustrate their methods of operation.

On 4 August 1944 intercity truck operations between the Mississippi River and the Rocky Mountains virtually ceased as the result of strikes. After a week of unsuccessful effort to resolve the difficulty, 103 trucking concerns were seized by the Office of Defense Transportation, acting under an executive order, and normal operations then were restored gradually. The interim task of keeping war freight moving was assumed by the zone transportation officer at Omaha, aided by the district transportation officers at St. Louis, Minneapolis, Kansas City, and Denver.[260] The first step was to determine what freight it was essential to move without delay, and an inventory of such freight was prepared with the aid of transportation officers and technical service officers at Army installations. Agreements were made with the labor unions to furnish dock workers and drivers to move this freight and with the carriers to furnish equipment. A certificate was issued for each shipment, signed by an Army transportation officer and a union representative. In some cases, under agreements with the unions, consignees were permitted to call for and pick up shipments with their own vehicles. In areas not wholly tied up by the strike an effort was made to have freight transferred from struck carriers to truck lines that were not struck, or failing that, to have it diverted to railroads. At terminals where the carriers refused to allow the entrance of union drivers or to transfer the freight to other carriers, agreements were made permitting government vehicles operated by military personnel to remove the freight and deliver it either to local consignees or to rail terminals. Approximately 2,000,000 pounds of essential freight were moved by these methods.

During May and June 1945 truck operations in Chicago were seriously affected by strikes, the more critical phase beginning on 16 June. Again acting under Presidential authority the director of Defense Transportation seized the plants and facilities of the carriers having agreements with the labor unions involved. In accordance with the executive order, issued 23 May, he called on the Secretary of War to provide protection for persons employed or seeking employment with the struck carriers and for the seized plants and facilities and to furnish equipment and manpower necessary to carry out the purpose of the order. The Secretary of War delegated the authority to perform these functions to the Commanding General, Sixth Service Command, whose headquarters were in Chicago.[261] The service commander in turn appointed the Sixth Zone Transportation Officer as director of transportation for the emergency. Working in co-operation, the Zone Transportation Officer and the federal manager appointed by ODT prepared a list of motor carriers, showing the importance of each in the war effort. The city was divided into districts and an Army officer was placed in

[259] For summary of actions taken in connection with strikes between 1 Jan 45 and V-J Day see Memo 9, sub: Labor Disputes in Trucking Industry, in series of reports prepared by Labor Br of Ind Pers Div entitled, Labor Relations, OCT HB Ind Pers Div Labor Br.

[260] Memo, C of Hwy Br ZTO 7th zone, sub: Strike of Truck Drivers, in App. to Hist Rec 7th TZ, 1 Jul–30 Sep 1944, OCT HB 7th Zone. See also *Civilian War Transport*, pp. 283–85.

[261] Ltr, SW to Dir ODT, 6 Jun 45, AG 004.01 (23 May 45).

charge of each. The requirements of the several carriers for military personnel to serve as drivers, dockmen, and guards were determined, and more than 9,000 soldiers were assigned to duty in these capacities. About 100 commercial buses were leased to transport the soldiers to and from the truck terminals. About 100 Army trucks were used to handle especially important shipments. By these methods essential war freight was kept moving up to the end of the strike on 27 June.[262]

The Chief of Transportation took an active interest in the condition of the highways, which affected the efficiency of both Army vehicles and commercial vehicles hauling military traffic. Early in the war his Highway Division established an Engineering Branch to deal with these matters in an advisory capacity.[263] After the establishment of transportation zones in December 1942 the highway officers in the zones took over such activities in their respective areas and dealt with the state and local highway officials, while the Highway Division in Washington handled only matters which called for liaison with federal agencies or involved federal aid.[264]

Highway improvement projects coming within the purview of the Public Roads Administration were referred to the War Department for consideration from the standpoint of military requirements and therefore were subject to review by the Chief of Transportation's Highway Division. Under wartime conditions only the most necessary projects were approved. During the last eight months of 1943, for example, the Highway Division endorsed 29 projects, totaling 199.5 miles of highway, and disapproved 24 projects, totaling 94.6 miles.[265] In July 1944 the Public Roads Administration requested the recommendations of the War Department regarding six highway projects in Pacific coast states, of which only one was endorsed after investigation by the zone highway officers and the Highway Division.[266] During the fiscal year 1945, under a new procedure, the War Production Board reviewed 568 highway projects, of which only ten were submitted to the War Department for consideration from the standpoint of military importance, and only two were certified.[267]

The Federal Highway Act of 1944 provided for federal aid in the postwar development of highways and the designation of a National System of Interstate Highways to connect the principal industrial areas and to connect at border points with important highways in Canada and Mexico.[268] Since one of the objects of the act was the development of a highway system adequate for national defense under conditions of modern warfare, the Public Roads Administration called on the Secretary of War for his recommendations regarding a report of the National Inter-regional Highway Committee which had been appointed by the President in 1941 and also regarding secondary

[262] Hist Rpt, 6th TZ, 2d quarter 1945, Hwy Sec, OCT HB 6th Zone: *Civilian War Transport*, pp. 285–86.

[263] Hwy Div Cir 2, Sec. VIII, 21 Nov 42, OCT HB Hwy Div Cirs.

[264] See TC Cir 50–57, 19 Feb 45, sub: Status of Hwy Improvement Projects and Adverse Hwy Conditions; OCT Misc Ltr 83, 10 Mar 45, sub: Natl Def Hwys.

[265] ASF MPR, Sec. 3, Dec 43, p. 69.

[266] Memo, Hwy Div OCT for Exec Asst OCT, 18 Jan 45, p. 5, OCT HB Hwy Div Rpts.

[267] Annual Rpt, Hwy Div FY 1945, p. 21, OCT HB Hwy Div Rpts.

[268] PL 521, 78th Cong., approved 20 Dec 44; OCT Misc Ltr 83, 10 Mar 45, sub: Natl Def Hwys, OCT Hwy Div Hwy Network.

roads serving Army installations.[269] After about six months of study, in collaboration with the Corps of Engineers and with the aid of the zone highway officers and the state highway traffic advisory committees, the Chief of Transportation rendered a report on the subject in October 1945.[270] He proposed certain additions to the routes recommended by the National Inter-regional Highway Committee and submitted a list of access roads, serving Army installations, whose maintenance in serviceable condition by state and local authorities he considered essential.

Inland Waterways and Airways

During the years just prior to World War II, domestic freight traffic moving by water was almost as great, measured in ton miles, as that moving by rail.[271] The total of water-borne traffic decreased during the war because of the withdrawal of ships from coastwise and intercoastal routes, but the traffic on the rivers, canals, and Great Lakes increased. Consistent effort was made by the Office of Defense Transportation to encourage the use of inland waterways as a means of lightening the load on the railroads. This effort included the construction of tugs, tow boats, and barges with funds provided by the Defense Plant Corporation and the charter of these vessels to private operators.[272] The principal objective was to increase the movement of bulk commodities by barge, particularly petroleum, which became a heavy additional burden on the railroads after the tanker fleet was withdrawn from service between Gulf and North Atlantic ports.

The Army had used the inland waterways only sparingly during the pre-emergency period, and the years 1940–41 brought scant increase in this traffic. Army regulations required shipping officers to give consideration to the water carriers, since their rates frequently were lower than those of the railroads.[273] There were other considerations, however, which militated against the movement of military supplies by barge. The principal factor was that of delivery time. The construction of Army camps, depots, and manufacturing plants and the delivery of supplies and equipment to troops in training were often behind schedule, so that the use of slow-moving river craft seldom was viewed with favor by either shippers or consignees. Shipments by barge nearly always involved transshipment to rail or truck, since few Army installations had facilities for direct delivery by water. Through billing for rail-water shipments was permissible only on a limited number of routes. Water rates on nonbulk commodities frequently were higher than land-grant rail rates. Information regarding inland waterway services and tariffs was not readily available, since this form of transportation did not come under the regulation of the Interstate Commerce Commission until after the passage of the Transportation Act of 1940.

Early in 1941 Mr. Alexander Dann, a member of The Quartermaster General's Transportation Advisory Group, pointed out that some of the Ordnance plants then under construction were located near nav-

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[269] Ltr, 23 Apr 45, OCT 611 Natl Def Hwys 1945.

[270] Memo, CofT for CG ASF, 19 Oct 45; Ltr, SW to PRA, 6 Nov 45. Both in OCT 611 Natl Def Hwys 1945.

[271] Industry Report, Transportation Div, Bureau of Foreign and Domestic Commerce, Dept of Commerce, Domestic Transportation, Dec 45–Jan 46, p. 8.

[272] *Civilian War Transport*, p. 182.

[273] AR 30–905, par. 8a, 1 Aug 29.

igable rivers but that apparently no facilities were being provided to enable them to utilize river transportation.[274] The Ordnance Department, after a study of the problem at the Indiana Ordnance Works, reported that the use of river transportation would involve the installation of extensive water-front facilities and a multiple conveyer system to handle the different types of bulk materials, as well as some additional rail trackage, all of which would add to the transportation cost.[275] The report further stated that the plant was adequately served by rail, which it characterized as "flexible, efficient, and dependable transportation." Other supply services, informally consulted, also indicated their preference for rail service because of its greater convenience and speed.[276]

The increasing pressure on the railroads during the fall of 1941 led to positive measures on the part of The Quartermaster General's Commercial Traffic Branch to route a larger amount of traffic by the barge lines.[277] Also, the branch cast its influence in favor of locating new installations on or near waterways whenever that appeared to be a practical possibility. Soon after the establishment of a chief of transportation in March 1942, an Inland Waterway Branch was created in the Traffic Control Division, staffed by experts whose primary function was to build up information regarding services, terminals, and rates, and otherwise to encourage the use of barge routes for Army freight.[278] Cognizance was taken of the fact that in many fields the necessity for the delivery of supplies by the fastest possible means no longer existed. This was true especially of matériel being shipped to storage installations. Transportation officers in the field, when requesting routings of carload shipments from the Traffic Control Division, were directed to indicate the required delivery dates so that the possibility of water routing could be considered.[279]

When the pioneering work for which the Inland Waterway Branch had been established was completed, it then became a section of the Freight Traffic Branch which dealt with all forms of transportation. Finding that its effort to route Army traffic by water frequently was handicapped by lack of barges or power vessels, the section undertook a survey to ascertain what marine equipment, commercial or government-owned, was not being used to best advantage and to arrange for the transfer of any such equipment to more essential work. One result of this undertaking was the transfer of eighteen large Army-owned tank barges, which had been used primarily for storage purposes at Army installations, to the Gulf Intracoastal Waterway where they were employed for the transportation of gasoline to installations of the Army Air Forces.[280] When it was found that opportunities to use water routes were being overlooked by branches of the Army or other government

[274] Ltr to Chm Trans Advisory Gp OQMG, 27 Jan 41, OCT HB Topic Dann.

[275] Rpt by Maj A. C. Welsh, 14 Aug 41, sub: Advisability of Utilizing Water Trans at Indiana Ordnance Works, OCT HB Topic Dann.

[276] Memo, C. C. Wardlow for Col Dillon, 30 Apr 41, OCT HB Topic Dann.

[277] OQMG Cir Ltr 275, par. 8, 14 Oct 41.

[278] OCT HB Monograph 24, pp. 49, 50. For analysis of traffic by commodities and ports see Memo, Col W. J. Williamson for Col F. B. Hodson, 13 Oct 42, OCT 560 Gen.

[279] Memo, TAG for ACofS Opns Div WDGS, CG AGF, etc., 9 Nov 42, sub: Relief of Strain on RR Facilities, OCT HB Topic Inland Waterways.

[280] Memo, Maj H. R. Hendricks for Brig Gen W. J. Williamson, 24 Sep 45, sub: Accomplishments and Handicaps—Freight Traffic Branch, OCT HB Traf Contl Div Rpts.

agencies, such opportunities were pointed out, always with the explanation that the railroads should be relieved of traffic which reasonably could be diverted to other carriers, in order that they might more expeditiously handle the essential military movements for which they were peculiarly suited.[281] Barge lines which had not agreed to equalize the rail land-grant rates were encouraged to do so, in order that their services might be more freely used.

The volume of Army freight moved on domestic waterway routes increased from 18,185 short tons in December 1941 to a monthly average of 157,642 tons in 1944, and it totaled 4,046,177 tons during the forty-five war months. The preponderant part of this traffic consisted of bulk shipments of petroleum products, principally aviation gasoline.[282] The remainder, estimated at about 12 percent, consisted of general supplies and equipment. An important item in the latter category was motor vehicles, which moved by both river barge and Great Lakes steamer. During the latter part of the war considerable bulk grain was shipped down the Mississippi for transshipment to Europe, under the civilian aid program.

The quantity of matériel shipped by commercial aircraft on domestic routes was slight. During the years 1942–45 the annual average was 1,268 short tons, and the monthly shipments exceeded 200 tons in only one instance.[283] On the one hand, space was limited because the commercial airlines did not then operate special cargo services and in 1942 had surrendered approximately half of their planes to the Army. On the other hand, in view of the higher cost, air express was utilized only when railway express was too slow.[284] The above tonnage figures do not include shipments effected by military aircraft, under arrangements between the Office of the Chief of Transportation and the Army Air Forces. Military aircraft were used for Army Service Forces' supplies chiefly to enable emergency shipments to reach ports of embarkation in time for loading in specific vessels or convoys, and the weight of such shipments is not available. All airfreight movements, whether by military or civil aircraft, were controlled by the Air Transport Command, AAF, under a priorities system.[285]

Priorities for passenger travel by air also were under the control of the Air Transport Command. Such travel naturally was limited to individuals, as distinguished from units. Following revision of the Joint Military Passenger Agreement with the rail carriers in July 1941, which has been discussed in connection with highway traffic, the Army had greater latitude in the use of air transport so far as its commitments to the railroads were concerned. Also, for the period of the emergency the greater cost of air travel could be disregarded "when time or other exigencies of the service" did not permit the use of "the usual modes of trans-

[281] Ltr, DCofT to ODT, 20 Jul 42; Memos, CofT for CofOrd, 21 Aug 42 and 6 Oct 42; Memo, C of Traf Contl Div OCT for DCofT, 16 Jan 43; Ltr, CofT to Mississippi Valley Barge Line, 9 Sep 42. All in OCT 544.2 Use of Barge Line Trans.

[282] Summary by author, 18 May 1950, sub: Army Traf by Domestic Water Carriers and Air, OCT HB Traf Contl Div Freight; ASF MPR, Sec. 3, Aug 45, p. 11. Figures in summary are for actual shipments, those in MPR are for routings and are higher than actual shipments.

[283] Summary cited n. 282.

[284] AR 55–155, par. 34, 27 Nov 42, provided that air express should be used only in "extreme emergencies."

[285] WD Cir 385, Sec. II, 27 Nov 42.

portation." [286] But limited capacity, together with the fact that an increasing number of military aircraft was available, operated as an effective check on the growth of travel by commercial airlines up to V-E Day. During the redeployment and repatriation periods the use of commercial air transport for Army personnel was expanded greatly, for the dual purpose of relieving the overtaxed railroads and affording quicker dispatch for men who had just returned from service overseas.

Relations with Federal Regulating Agencies

As representative of the nation's largest shipper, General Gross and his staff necessarily maintained close contact with the two federal agencies which were concerned with the regulation of domestic surface transportation—the Interstate Commerce Commission and the Office of Defense Transportation. ICC, functioning since 1887 with a gradual increase in statutory authority, had extensive peacetime powers to regulate the carriers' services and rates in the public interest, and it had certain emergency powers to enable it to deal more effectively with transportation problems in time of war.[287] ODT, created in December 1941 as a purely wartime agency under the directorship of Joseph B. Eastman, had broad authority to co-ordinate transportation services, control movements, enforce efficiency, and assist the carriers in maintaining facilities adequate for the needs of a nation at war.[288]

There was an area of overlapping between the powers of the Interstate Commerce Commission and the Office of Defense Transportation pertaining to services and movements, but conflicts were avoided through close co-ordination. ICC continued to regulate the carriers' operations through the issuance of service orders and the placement of embargoes, sometimes on its own initiative and sometimes at the request of ODT.[289] In October 1942 Commissioner J. Monroe Johnson, in charge of the ICC Bureau of Service, gave notice to the Army that he did not consider military movements outside his purview. Following up a letter which he had written to General Somervell concerning reports of unnecessary troop travel on the railroads, the reply to which he evidently did not consider satisfactory, Johnson stated that the emergency powers vested in his organization had not been impaired by the creation of ODT, and suggested that those responsible for Army transportation should familiarize themselves with the ICC prerogatives and with the relation of ICC to "all movements of every nature by rail or motor." [290]

After the receipt of Commissioner Johnson's letter, General Somervell requested the Chief of Transportation to make a study of the powers and limitations of the Interstate Commerce Commission and the Office of

[286] AR 55–120, par. 3, 26 Apr 43. In addition to Army personnel traveling on official business, air priorities could be granted to personnel on leave in the U.S. prior to departure for oversea service, under WD Cir 39, Sec. III, 4 Feb 43.

[287] See ICC, *56th Annual Report,* November 1, 1942, pp. 2–5.

[288] EO 8989, 18 Dec 41, and EO 9156, 2 May 42, give the basic ODT powers. See Eastman, *Selected Papers,* pp. 6–11, for statement of policy by Director of ODT. Eastman, a member of ICC, was loaned to ODT when the latter agency was created.

[289] ICC, *56th Annual Report,* November 1, 1942, pp. 15–21, outlines the emergency service orders issued during the first ten months of war.

[290] Ltrs, Johnson to Somervell, 20 Oct 42; Somervell to Johnson, 23 Oct 42; Johnson to Somervell, 27 Oct 42. All in OCT HB Gross Rail.

Defense Transportation under the law.[291] He explained his request by saying that the President had authority to place all rail transportation under the Secretary of War and that if the two civilian agencies felt they were in control of transportation to the extent of interfering with military movements, this attitude created an "intolerable situation" which should be presented to the President by the Secretary of War. The analysis of the powers of these agencies indicated that they were indeed broad, but it also indicated that the President had overriding powers with respect to priority of movement and that the executive order establishing ODT expressly enjoined collaboration of that agency with the Army and the Navy with respect to the strategical movement of troops and supplies.[292] In transmitting this report to Somervell, Gross stated that he had talked with both Johnson and Eastman; he believed that Johnson, while stressing the ICC authority, wanted to be helpful; he considered the relations between the Transportation Corps and Eastman good; and he feared no interference with military movements from either source.[293]

Section 1 (15) of the Interstate Commerce Act provided: "In time of war or threatened war the President may certify to the Commission that it is essential to the national defense and security that certain traffic shall have preference or priority in transportation, and the Commission shall, under the power herein conferred, direct that such preference or priority be afforded." Section 6 (8) of the Act provided: "In time of war or threatened war preference and precedence shall, upon demand of the President of the United States, be given over all other traffic for the transportation of troops and material of war, and carriers shall adopt every means within their control to facilitate and expedite the military traffic." In the summer of 1943 the Office of Defense Transportation proposed the adoption of a procedure under which ODT, with Presidential authority, would issue a certificate of preference to ICC covering shipments considered essential to the national defense.[294] Although the initial discussion of this proposal had indicated that a general certification was contemplated, the form of certificate proposed by ODT caused the Army to fear that in practice the plan would involve issuance of a certificate for each shipment and the filing of a request by the Army in each instance. The War Department saw no need for adding this complication to the already heavy task of moving troops and impedimenta. It pointed out that from the beginning of the emergency the carriers had systematically granted precedence to military movements and that this arrangement had worked "efficiently and satisfactorily." The War Department, accordingly, declined to concur in the proposal and did not request the issuance of certificates for its movements.

During the winter of 1942, when the Office of Defense Transportation was establishing its organization and procedures, Gross had taken a wary attitude toward its course of development and had resisted some of its moves which he thought might

[291] Memo, 1 Nov 42, OCT HB Gross Rail.

[292] Memo, Maj Luke W. Finlay for Gen Gross, 6 Nov 42, sub: Relationship of ICC, ODT, and WD, ASF Hq Trans 1942.

[293] Memo, Gross for Somervell, 12 Nov 42, sub: Legal Status and Powers of ODT and ICC, ASF Hq Trans 1942.

[294] Memo, James H. Graham for USW, 8 Jul 43; Ltr, USW to Dir ODT, 9 Jul 43. Both in OCT HB Gross ODT.

lead to encroachments on the Army's transportation functions.[295] This watchful defensive policy was continued, and on several subsequent occasions ODT proposals were opposed as involving activities outside its proper sphere.[296] Gross recognized nevertheless that such an agency was necessary to insure that the carriers got the equipment they needed and that the transportation resources of the nation were used to best advantage; he regarded that type of regulation a desirable alternative to outright government operation. He therefore was ready to give ODT a full measure of co-operation in the accomplishment of these objectives. In accordance with the executive order under which ODT functioned, he appointed the chief of his Rail Division as formal liaison officer in matters relating to rail equipment and service and the chief of his Highway Division as liaison officer in connection with highway transportation. The Chief of Transportation himself, and his director of operations, had frequent contact with the key officials of ODT regarding important matters of policy and procedure.

Many orders, issued by the Office of Defense Transportation and the Interstate Commerce Commission to govern transportation and traffic in general, could not be applied equally to military traffic without impairment of the war effort. Since delay and confusion were involved in working out amendments to orders which already had been issued, the Chief of Transportation requested that such orders be submitted to his office for review in advance of issuance. Under Eastman's direction, ODT followed this procedure, with the result that its orders when published were attuned to military requirements. On the other hand, ICC refused to permit its service orders to be reviewed by the Army before they were issued, and while in some instances it subsequently agreed to modifications proposed by the Army, in other instances it definitely refused to make such adjustments.[297]

The problem of adapting general regulations to military needs is illustrated by the case of ICC Service Order 99, issued on 3 February 1943. Under this order an agency was established at Chicago, upon request of the Office of Defense Transportation, with authority to divert transcontinental freight traffic in order to relieve lines or terminals which were congested or threatened with congestion. The order was applied to all War Department freight traffic except impedimenta moving with troops. The Chief of Transportation was in agreement with the general purpose of the order, but he foresaw that it would involve delays to important shipments of Army supplies and would interfere with the system of movement regulation operated jointly by the Army and the Association of American Railroads. A request for the exemption of Army shipments was made to the Interstate Commerce Commission soon after the order was issued, but it was not allowed. In refusing the request, Commissioner Johnson stated that while every effort would be made to avoid delaying important ship-

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[295] See Ch. II, p. 45.

[296] See Memo, Col McIntyre for C of Rail Div OCT, 7 Nov 43, and Ltr, C of Rail Div to ODT, 12 Nov 43, OCT 617 Rail Facilities, limiting ODT investigation of rail operations at Army installations to cases where commanding officers requested survey. See also Ltrs, USW to ODT, 7 Nov 43 and 29 Mar 44, OCT HB Gross ODT, rejecting ODT proposal to join with Army, Navy, and WSA in study and control of port facilities.

[297] Memo, Brig Gen W. J. Williamson for Hist Unit OCT, 22 Jan 45, and atchd Report of Relations between the Traffic Control Division and Civilian Agencies, pp. 3–35, OCT HB Traf Contl Div Rpts.

ments by diversions, Army traffic could not be exempted from this control because of its volume; he added that while the ICC considered its orders carefully before issuing them, it did not "submit its contemplated actions for approval." After about a year of experience under the order, General Gross appealed personally to Mr. Eastman, Director of Defense Transportation, with the result that symbol (expedited) shipments were exempted from the Chicago agency's diversion orders.[298]

A very significant working arrangement between the Chief of Transportation and the Office of Defense Transportation was that pertaining to the control of portbound freight traffic. The Army considered it imperative that a control system be established that would apply to all freight destined to the ports and would provide adequate insurance against congestion at the seaboard such as had seriously affected oversea military operations in 1917–18. Under the executive order by which ODT was created, it had the authority to exercise such control.[299] Moreover, ODT was responsible for co-ordinating inland traffic movements with ocean shipping in co-operation with the federal agency having control of shipping. After extensive conferences during January and February 1942, a system was agreed on by the Army, ODT, and the War Shipping Administrator, which satisfied the military requirements. A Transportation Control Committee was established, composed of representatives of these three agencies, the Navy, and the British Ministry of War Transport, to which ODT delegated over-all authority to regulate portbound movements. The carriers were forbidden to accept individual shipments to the ports unless they were covered by ODT permits, and the Traffic Control Division in the Office of the Chief of Transportation was authorized to issue such permits for Army shipments and all lend-lease shipments. This control plan, which will be more fully discussed in another volume of Transportation Corps history, proved highly effective and liquid conditions were maintained at the ports to the end of the war.

After the death of Joseph B. Eastman in March 1944 Commissioner Johnson was designated Director of Defense Transportation. The Under Secretary of War requested the Chief of Transportation to keep him advised if any difficulties should arise in the wake of this change of ODT leadership.[300] As it developed, there were no important changes in procedure, nor was there any lessening in the co-operative effort. There were nevertheless sharp differences of opinion between the new Director of Defense Transportation and the Army on some matters affecting military traffic.

The most difficult phase of the relationship between the Army and the Office of Defense Transportation came after V-E Day. As had been foreseen, the period of redeployment and repatriation placed an unprecedented strain on the passenger facilities of the railroads. There were delays in moving troops from the debarkation ports because of lack of equipment, and many soldiers made long trips in day coaches because sleepers were not provided. The Chief of Transportation, on the one hand, pointed to the desirability of effecting re-

[298] Ltrs, Gross to Eastman, 11 Jan 44 and Eastman to Gross, 17 Jan 44, OCT 040 ICC Sv Orders; Ltrs, Gross to Johnson, 13 Feb 43; Johnson to Gross, 19 Feb 43; Gross to Johnson, 13 Mar 43; Johnson to Gross, 25 Mar 43; Ltr, W. F. Kirk ICC Bureau of Sv Chicago to Col W. J. Williamson OCT, 5 Oct 43. Last five items in OCT 040 ICC Sv Order 99.

[299] EO 8989, 18 Dec 41, pars. 3c and d.

[300] Memo, 6 Apr 44, OCT HB Gross ODT.

deployment, and later repatriation, as quickly as possible, and protested the failure of ODT to withdraw more rail equipment from regular services so that it could be used in troop trains. The Director of Defense Transportation, on the other hand, complained that he was not adequately informed of the Army's fluctuating schedule for bringing troops back to the United States and pointed out that regular services on the railroads had been severely cut in order to meet the military demand for cars. There were many angles to the controversy which need not be cited here, since they will be dealt with when troop movements are discussed. For the present purpose it will suffice to say that despite the misunderstandings with which the redeployment movement was launched and the intensified problems encountered after repatriation from both European and Pacific theaters was begun, the numbers of returning troops cleared from U.S. ports during the late months of 1945 set a remarkable record.[301]

[301] Without attempting here a full documentation of this subject, the following key letters are cited: Gross to Johnson, 30 May 45; Johnson to Gross, 11 Jun 45; Johnson to USW, 6 Jul 45; USW to Johnson, 9 Jul 45; Dir War Mobilization and Reconversion to SW, 18 Jul 45; USW to Dir WM&R, 30 Jul 45; Johnson to Brig Gen R. H. Wylie ACofT, 19 Dec 45. All in OCT HB Gross ODT. See also Johnson to Army and Navy, 6 Dec 45; Wylie to Johnson, 12 Dec 45, OCT HB Wylie Staybacks.

CHAPTER X

The Army's Railway and Highway Operations

Although the Army relied mainly on commercial carriers for transportation in the zone of interior, for practical reasons it owned certain transportation equipment and facilities and engaged directly in the operation of certain transportation services. These activities pertained to utility railroads at Army installations, hospital cars for the movement of patients from ports to hospitals and between hospitals, tank cars to supply Army installations with petroleum products and other liquids, railroad repair shops for the performance of heavy repairs on Army railroad equipment, buses to provide local transportation in the vicinity of military reservations and war industries, and administrative vehicles for the use of Army posts, camps, and stations.

The Chief of Transportation had an interest in and certain responsibilities relating to all such equipment and services. In some instances his responsibilities were not acquired until the war was well advanced. In certain fields his authority was not so complete as he considered desirable from the standpoint of efficient operation.

Utility Railroads

Many Army installations covered large areas and embraced numerous facilities. Aside from the switching that was necessary in connection with the receipt and dispatch of freight and personnel, there were extensive transfer activities within the military reservations. The trackage on the reservations and that joining them with the tracks of the commercial carriers, the locomotives and rolling stock utilized on the reservations, and the facilities and personnel required for the operation and maintenance of such equipment constituted the utility railroad establishment. Except in a relatively few instances in which utility railroad operations were performed under contract by connecting commercial railroads, the equipment was owned by the Army and the operating and maintenance personnel was employed by it.

Responsibility for the utility railroads cannot be stated simply. Beginning early in 1942 it went through a series of adjustments which was not completed until late in the war. Broadly speaking, and with certain qualifications which will be explained later, the Chief of Transportation ultimately was responsible for the determination of requirements for plant and equipment, the procurement and assignment of locomotives and rolling stock, and the operation and maintenance of railroad equipment, except at installations where these functions were assigned to the services operating the installations. The construction and maintenance of track and other plant facilities were responsibilities of the Chief of Engineers.

The Chief of Transportation, like The Quartermaster General before him, endeavored to see that the utility railroad plants at posts, camps, and stations were adequate for the traffic which they would be expected to handle and that they were efficiently laid out. This was best accomplished when his railroad experts were given an opportunity to review the plans for new installations before construction was begun. Frequently that opportunity was not afforded, particularly in the early stages of the emergency when pressure on the Army's construction agency was heavy, with the result that many faults had to be corrected later. Sometimes proposals for improvements originated with the installation commanders, and sometimes they originated with representatives of the Transportation Corps or the Corps of Engineers. In any case they were passed on by the Chief of Transportation, whose Rail Division reviewed them from an operating standpoint and whose Traffic Control Division considered them from the standpoint of capacity and traffic flow. Reports of the Rail Division indicate that 41 improvement projects were investigated and approved during the fiscal year 1944, and 45 during the fiscal year 1945.[1]

Before April 1942 responsibility for the design and procurement of equipment for the utility railroads was distributed among the several supply services which operated the installations.[2] At that time, because of the increasing shortage of materials and the desirability of avoiding competition between the several elements of the Army in contracting for equipment, Services of Supply headquarters decreed that all general motive power and rolling stock should be designed and procured by the Corps of Engineers.[3] The design and procurement of special rolling stock required in connection with railroad artillery was to continue an Ordnance Department responsibility, but the design of such equipment was subject to approval by the Corps of Engineers with respect to trucks, couplings, and other strictly railroad features. When the above responsibilities of the Chief of Engineers were transferred to the Chief of Transportation in November 1942, separate responsibility for railway artillery remained with the Ordnance Department.[4] The importance of such equipment was on the decline, however, because of the development of motorized artillery and air coastal defenses.

On 1 July 1938 the Army-owned utility railway equipment included 100 locomotives, 67 locomotive cranes, 24 box cars, 236 flat cars, 141 gondola cars, 43 passenger cars, and 121 smaller types of cars, totaling 732 units.[5] The expansion of the Army which began in 1940 called for the construction of new installations and the enlargement of others, and the requirements for utility railroad equipment expanded accordingly. There was particular need for new and more suitable types of locomotives, and the orders placed during this period included diesels as well as the customary gasoline and steam units. On 1 July 1942 the equipment in service included 227 locomotives, 106 locomotive cranes, 12 box

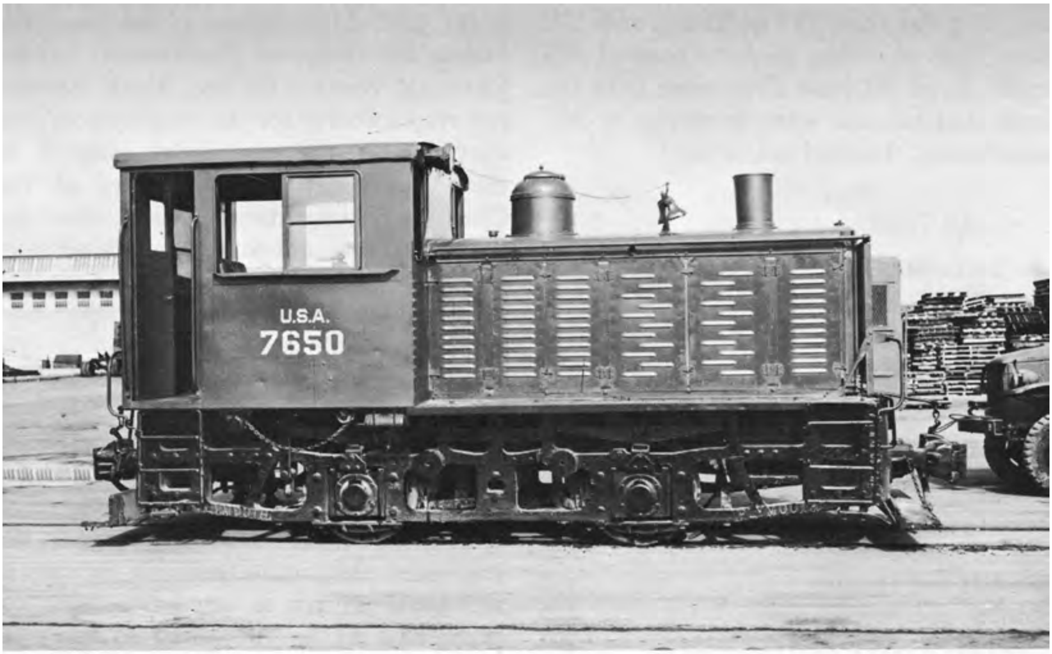
[1] Rpts, FY 1944, pp. 16, 17, and FY 1945, pp. 12, 13, OCT HB Rail Div Rpts.

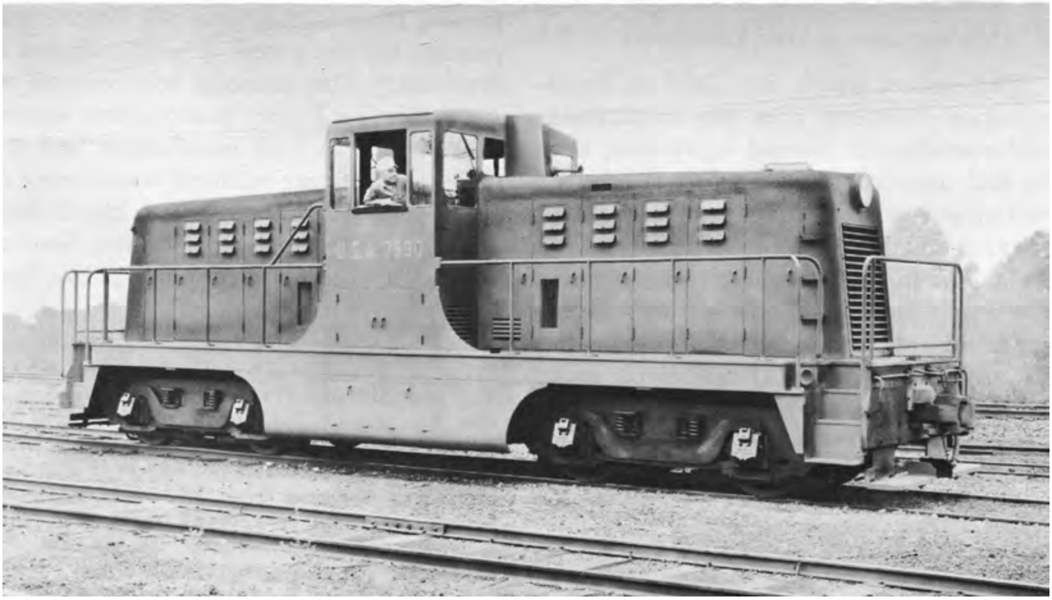
[2] AR 100–50, pars. 4 and 5, 20 Sep 35. QMG, who procured most such equipment, placed contracts through the CofEngrs but provided the funds and established the designs. See OCT HB Monograph 6, pp. 374–78.

[3] Memos, CG SOS for C's of Supply Svs, 18 Apr 42, and 26 Jun 42, OCT 453 Procurement of RR Equip; AR 100–50, par. 4b(2), 1 Sep 42.

[4] WD GO 60, 4 Nov 42.

[5] List, Government-Owned Railroad Equipment as of July 1, 1938, OCT HB OQMG Coml Traf Br.





LOCOMOTIVES FOR UTILITY RAILROADS. *Prewar 20-ton gasoline switcher, used for light work (top). An 80-ton diesel-electric, introduced during the war for the heavier switching jobs at Army installations (bottom).*

cars, 252 flat cars, 147 gondolas, and 179 other types of rolling stock—a total of 923 units.[6] As of 30 June 1945 more than ten times that number were in service at 365 installations, classified as follows:[7]

Type	*Quantity*
All Types	9,424
Locomotives	1,476
Steam	315
Diesel	672
Gas	489
Locomotive Cranes	322
Auto Railers	85
Cars	6,782
Box	3,284
Flat	1,655
Gondola and Hopper	447
Powder and Ammunition	525
Passenger	291
Miscellaneous	580
Maintenance of Way Equipment	759

The control which the Chief of Transportation exercised over the employment and operation of railroad equipment, after he had assigned it to the several services, was subject to considerable qualification. An Army regulation issued in September 1942 gave him this responsibility, except when the equipment was "assigned to and operated in installations pertaining exclusively to another service." [8] Regulations issued subsequently made no provision for exceptions. Nevertheless, exceptions continued in the case of installations of the Army Air Forces, the Ordnance Department, and the Chemical Warfare Service, which assumed full responsibility for the employment and operation of the equipment assigned to them.[9] Although representatives of the Chief of Transportation visited these installations, they did so in a purely advisory capacity. Even where he had operating responsibility, the Chief of Transportation could give only such supervision as was possible through the occasional visits of his inspectors. Direct control was exercised by the commanding officers of the installations, who engaged the crews and governed the employment of the equipment.[10]

In the spring of 1943 General Gross, not convinced that utility railroad equipment was being utilized to best advantage, proposed that he be authorized to make investigations at all Army installations, including those of the Army Air Forces, and reassign the equipment if he should find it desirable.[11] This proposal was rejected by Army Service Forces headquarters insofar as it applied to AAF installations, and the Chief of Ordnance withheld concurrence in respect to installations under his control. With regard to the latter's position, General Clay, ASF Director of Matériel, pointed out

[6] Memo, Rail Div for C. C. Wardlow, 27 Nov 42, OCT HB Rail Div Rpts.

[7] Rpt, Rail Div, FY 1945, pp. 19, 20, OCT HB Rail Div Rpts. In addition to above types which were used for on-post work, 1,082 tank cars were assigned to installations which they supplied regularly with petroleum products, acids, and other liquids. Tank cars are discussed in next section of this chapter.

[8] AR 100–50, par. 4b(1), 1 Sep 42.

[9] AR 55–5, par. 3d, 5 Oct 42; AR 55–650, par. 4b(1), 27 Feb 43; 4th Ind, CofT for CofCWS, 12 Aug 43, OCT 020 Transfer of Functions; Annual Rpt, Rail Div FY 1945, p. 20, OCT HB Rail Div Rpts.

[10] Utility railroads were not subject to state laws prescribing minimum crews, and installations were directed to provide only enough personnel to insure efficiency and safety. See WD Cir 423, Sec. III, 27 Oct 44.

[11] Memo, ACofS for Matériel ASF for CofT, 13 May 43, sub: Proposed Revision of AR 55–650; Memo, CofT for ACofS for Matériel ASF, 18 May 43, sub: Survey of Trans Facilities; Memo, Dir Prod Div for Dir Matériel ASF. All in ASF Hq Dir Matériel RR Equip.

that while the Ordnance Department was recognized as qualified to determine its own need for utility railroad equipment, there remained a staff responsibility to insure that equipment was equitably distributed among the several services and installations.[12] An order then was issued by the Commanding General, Army Service Forces, stating that periodical surveys would be made by representatives of the Chief of Transportation at all ASF installations and that the findings and recommendations would be submitted to the ASF Director of Matériel in the case of arsenals, Army-owned ordnance production plants, and proving grounds, and to the ASF Deputy Chief of Staff for Service Commands in all other cases.[13] In addition to making the reassignment of equipment a staff matter for ASF headquarters rather than one on which the Chief of Transportation could act directly, the order emphasized that the surveys would not "reflect upon or detract from" the responsibilities of the chiefs of technical services.

In accordance with the terms of this order, the Chief of Transportation notified the other technical services in advance of making periodical surveys. In so doing, he stated that the investigations would cover the assignment of utility railroad equipment and manpower and the extent of car utilization.[14] Determined to make the best possible use of the opportunity to visit the installations, he offered the services of his representatives, whom he described as experienced professional railroad operating men, to make special surveys of operating methods on request of the chiefs of the technical services.[15] During the fiscal year 1944 surveys were made at 49 Ordnance installations and 111 other installations—a total of 160. During the fiscal year 1945, 119 Ordnance installations and 123 other installations were surveyed—a total of 242. As a result of the surveys during the latter period, 60 locomotives were declared in excess of needs, 40 at Ordnance and 20 at other installations; recommendations were made that 201 persons employed in railroad crews be released, 148 at Ordnance installations and 53 at other installations.[16]

During the early part of the war the Chief of Transportation's responsibilities with regard to the employment and operation of equipment were performed through inspectors sent out by his Rail Division in Washington. Later this function was assigned to trainmasters who were attached to the nine zone transportation offices. Under the circumstances outlined above, the effectiveness of the trainmasters in improving operations depended largely on the receptivity of installation commanders to their advice. After the end of the war the zone transportation officer of the important sixth zone,. with headquarters at Chicago, stated that although his trainmaster had accomplished fine results he had been handicapped in dealing with some installations by the fact that his duties had not been set forth officially in the War Department directives.[17] The Rail Division, on the basis of its experience during the war, was convinced that in order to insure optimum

[12] Memo for CofOrd, 14 Jun 43, ASF Hq Dir of Matériel RR Equip.

[13] Memo for C's of Tech Svs, 25 Jun 43, sub: Survey of Trans Facilities, ASF Hq Dir of Matériel Trans.

[14] See Memo to CofOrd, 27 Sep 44, OCT 617 RR Facilities.

[15] Memo for CofEngrs, 8 Oct 43, and similar memos to other tech services, OCT 617 RR Facilities.

[16] Rpt, Rail Div FY 1945, p. 14, OCT HB Rail Div Rpts.

[17] Ltr to OCT, 18 Sep 45, pp. 1, 9, 10, OCT HB 6th Zone.

utilization the Chief of Transportation should have "complete and final assignment jurisdiction over all railroad equipment at all War Department installations." [18]

With regard to the maintenance of utility railroad equipment, the Chief of Transportation attained a somewhat stronger position, though not until late in the war. Before November 1944 the maintenance of equipment employed at Ordnance, Chemical Warfare, and Air Forces installations was not subject to his supervision, though the installation commanders might be guided by his advice. In that month his maintenance responsibility was extended to include all installations except those of the Ordnance Department which were operated by contractors who had been given full control of the plant facilities under their contracts.[19] It had become clearly evident that careful and authoritative supervision of the maintenance and repair of locomotives by expert technicians was necessary, because of the lack of experienced operating and maintenance personnel at the installations and the intensive utilization to which the equipment was subjected. Since the Chiefs of Ordnance and Chemical Warfare Service had authority to transfer equipment from one installation to another as they saw fit, they were required to notify the Chief of Transportation of such transfers in order that he might have this information when planning his maintenance activities. No similar requirement was made of the Army Air Forces.

The supervision of maintenance was exercised initially through civilian inspectors sent out from Washington. Beginning in the spring of 1943 the inspection function was decentralized to the transportation zones, and Army officers known as master mechanics were assigned to the zone offices. Their duties were clearly defined by the War Department directive of November 1944, referred to above. It stated that master mechanics were authorized to visit War Department installations periodically to inspect railroad equipment and repair facilities and to advise operating and maintenance personnel regarding proper methods of mechanical operation and care of equipment. Under this directive the master mechanics gave attention to all echelons of maintenance. Actual performance of the first and second echelons, which included all measures of preventive maintenance, was a responsibility of the commanding officers of the installations. The third, fourth, and fifth echelons (heavy maintenance) were the direct responsibility of the master mechanics, who determined when and where they were to be performed. Some installations had repair facilities adequate to perform the heavier work; otherwise such work was done at railroad repair shops operated by the Chief of Transportation, or at commercial shops. The Army's railroad repair shops were the parent stations for the supply of maintenance parts and materials required by the installations.

The sixth zone transportation officer, in a report rendered at the close of hostilities, indicated that his master mechanic had accomplished several important results, including the establishment of standard maintenance procedures at the installations, the establishment of a uniform system of instruction and supervision for operating and maintenance personnel, reduction of the time required for repair work, reduction of maintenance and operating costs, and a

[18] Memo for Exec Off OCT, 14 Sep 45, sub: Problems, Their Solution, and Lessons Learned, p. 4, OCT HB Rail Div Rpts.

[19] WD Cir 447, Sec. VII, 24 Nov. 44.

general improvement in the condition of equipment. Because of his technical qualifications, the master mechanic was able to establish close working relations with the commanders of installations, who frequently sought his advice. The exclusion of contractor-operated ordnance plants from the master mechanic's jurisdiction was considered unfortunate, since the personnel at such plants often lacked the experience necessary to efficient operation and maintenance.[20] Some of these plants voluntarily requested the aid of the master mechanics, and this was given promptly.

In order to promote uniform and efficient methods of operation and maintenance throughout the service, the Chief of Transportation issued technical manuals which were applicable to both utility railroads and military railroads. At the close of hostilities five such manuals were in circulation, dealing with the inspection and maintenance of locomotives and locomotive cranes; inspection and maintenance of rolling stock; maintenance of way; standard plans for roadways, tracks, and structures; and the painting and numbering of railroad equipment. These, and other manuals which were then in preparation, were based on experience in both commercial and military railroading.

Army Tank Cars

In June 1940 the Army owned or leased 598 tank cars which, with the exception of two helium cars, were used to supply gasoline and lubricants to Army installations and to troops during field exercises.[21] Since tank cars at that time frequently were used for storage purposes by the installations, the Army found it financially advantageous to operate its own equipment, which did not incur demurrage charges while on government-owned tracks. The railroads over whose lines the cars moved paid the Army a mileage rate which appreciably reduced the freight charges paid by the Army on the contents of the cars. At that time the tank car fleet was under the control of the Commercial Traffic Branch of The Quartermaster General's Transportation Division. That branch assigned cars to the respective installations, supervised their operation and maintenance, supplied routings whenever they were employed in line haul operations, and negotiated all arrangements with the railroads.

The enlargement of the Army which began in 1940 foreshadowed the need for a much larger tank car fleet. In particular it was foreseen that new Air Corps installations would require great quantities of petroleum products and that new Ordnance and Chemical Warfare plants would have heavy requirements of acids and other chemicals. Several hundred old Army cars which had been deadlined were available for rehabilitation, but were not sufficient to meet the need. The question then arose whether to purchase or lease additional equipment. For short periods leasing was cheaper, but over longer periods it was more economical to own the cars.[22] There was a difference of opinion as to the proper course to follow under the circumstances, but eventually the Commercial Traffic Branch obtained authority to purchase 500 cars for delivery during the last half of 1941.

[20] Ltr, 6th ZTO to C. C. Wardlow, 2 Nov 45, p. 2 of attached statement on relationships with installations, OCT HB 6th Zone.

[21] See OCT HB Monograph 6, pp. 366–72 for discussion of tank cars in 1940–41.

[22] See Data in Defense of Request for Additional Tank Cars, 6 Sep 40, OCT HB OQMG Coml Traf Br.

The clinching argument in favor of purchase was that the Army always could count on the services of equipment which it owned, whereas the railroads owned a very limited number of tank cars and the companies which controlled the bulk of this equipment were heavily committed to private industry.[23] This decision, and subsequent purchases of tank cars which by 1 July 1945 had increased the fleet to 4,100, assured the Army of adequate service during the nation-wide shortage of tank transportation which developed during the war. At the height of its activity the tank car fleet transported between 30 and 40 percent of the Army's total liquid shipments.[24]

In March 1942 the Commercial Traffic Branch became the Traffic Control Division in the office of the newly established Chief of Transportation. For a period the Tank Car Branch of the Traffic Control Division gave direct supervision to tank car operations throughout the country, but in 1943 this function was partially decentralized. During that year representatives of the branch were stationed in the eighth and ninth transportation zones, where a large part of the gasoline and oil shipments originated, and in the fourth zone, to which many of the shipments were destined. These representatives made their headquarters in Houston, Tex., Los Angeles, Calif., and Jacksonville, Fla. They were men of experience in handling petroleum traffic, and their function was to see that the Army tank cars were utilized with utmost efficiency. They maintained liaison with the oil companies and with Army installations and were authorized to reassign and to divert tank cars as might be found desirable. They performed a valuable service, since they relieved the Tank Car Branch in Washington of many details, provided direct supervision of operations in their respective areas, accelerated the turnaround of cars, and facilitated the shifting of cars to meet changing requirements.[25]

The Chief of Transportation procured all tank cars for the Army and had varying degrees of responsibility for their employment. He directly controlled the employment of cars engaged in the transportation of petroleum products, except that certain cars assigned to the Army Air Forces were controlled by the Air Service Command. The employment of certain chemical and acid cars, assigned to Ordnance and Chemical Warfare Service installations, was controlled by the Chief of Ordnance and the Chief of Chemical Warfare, respectively. The regulations required, however, that routings for all tank cars should be provided by the Chief of Transportation and that their movements should be reported to him promptly, in order that he might be informed of the tank car situation at each installation and be in a position to trace cars and verify mileage earnings.[26]

In the early part of the war contractors for the Ordnance Department and the Chemical Warfare Service, whose contracts gave them full control over the plants and facilities which they had agreed to operate, acquired a considerable number of tank cars. The great majority was leased by Ordnance contractors, who at one time controlled between 1,200 and 1,300; only

[23] Of 145,433 tank cars owned in U.S. in 1941 only 9,000 were owned by RR's. See AAR, *American Railroads and the War*, p. 49.

[24] Rpt, Traf Contl Div, sub: Accomplishments and Handicaps, Sep 45, Freight Br, p. 3, OCT HB Traf Contl Div Rpts.

[25] Statement by Col W. J. Williamson, C of Traf Contl Div, in Proceedings of Zone Transportation Officers' Conference, Washington, 24–26 Sep 43, p. 75, OCT HB Zones Gen.

[26] AR 55–105, par. 13, 29 Dec 42.

a small number was purchased.[27] When the Chief of Transportation learned of such acquisitions he took steps to obtain full information regarding the cars and bring them under his cognizance, so that he might arrange reassignments when surpluses developed at certain plants and shortages were found to exist at others.[28] As the initial leases made by contractors came up for renewal the Tank Car Branch undertook to consolidate them on its standard contract form, which was more favorable to the government.

The tank cars designed to transport chemicals and acids were used in supplying Ordnance and Chemical Warfare installations with products which they regularly required, and consequently the cars were assigned to those installations for indefinite periods. Generally speaking, such cars moved in shuttle services between certain points and their movements were covered by blanket or standing route orders issued by the Chief of Transportation, changed only when traffic conditions necessitated.[29] The cars designed for petroleum products, on the other hand, were operated in a large flexible pool under the direct control of the Tank Car Branch and its field offices. They were routed in the manner that would produce the greatest amount of service, and close control was exercised over their operation and maintenance.

About 350 petroleum cars which had been carried forward from World War I had a capacity of 7,000 gallons each. New petroleum cars held 10,000 gallons. The acid and chemical cars varied in capacity from 6,000 to 11,000 gallons, depending on the commodity for which they were designed. The assignment of tank cars to the transportation of the principal commodities, as of 1 July 1945, was as follows:

Total	4,101
Petroleum Products	1,680
Sulphuric Acid	848
Anhydrous Ammonia	838
Liquid Petroleum Gas	483
Ammonium Nitrate Solution	59
Methanol	43
Chlorine	38
Acetic Acid	37
Phosphorus	29
Miscellaneous	46

The mileage rate paid to the Army by the railroads over which the tank cars moved was uniformly 1½ cents per mile during the early part of the war, but later it was reduced to 1¼ cents for certain types of cars. These rates were paid on both loaded and empty mileage, provided the latter did not exceed the former. During the fiscal year 1944 the mileage earnings on Army tank cars were $1,134,489, and during the fiscal year 1945 they were $1,269,227.[30]

In view of the heavy demands made on the tank car fleet, the cars were kept moving as much of the time as possible. An effort made to minimize the number used for intraplant purposes was aided by the addition of fixed storage tanks and pipelines at the installations, which were short on such facilities in the early part of the emergency. The improved utilization is evidenced by

[27] Conf, author with A. L. Heimer, C of Bulk Liquids Sec Mvmts Div OCT, 7 Mar 49, OCT HB Traf Contl Div Tank Cars.

[28] See Memo, CofT for CofCWS, 13 Jul 43, sub: CWSX Tank Cars, OCT 531.4 N. Y.; Memo, Traf Contl Div for Hanford Engineer Works, 7 Apr 44, sub: Nitric Acid Tank Cars; 2d Ind, CofT for Washington Office of Manhattan Dist, 31 Oct 44. Last two in OCT 534 Manhattan Engr Dist Hanford Works.

[29] 1st Ind, C of Traf Contl Div OCT for CWS Procurement Dist N. Y., 17 Oct 42, OCT 531.4 New York.

[30] Annual Rpt, Traf Contl Div, FY 1945, p. 56, OCT HB Traf Contl Div Rpts.

the fact that whereas the average daily mileage for cars was 14.2 in 1941, it was 81.9 in 1943. The average mileage fell somewhat in 1944, when increased pipeline deliveries to the east coast resulted in many petroleum cars being taken out of high speed long haul service, and when changes in ordnance production temporarily reduced the demand for certain types of chemical cars. The results of the operation of the tank car fleet during 1942, 1943, and 1944 are summarized below:[31]

[31] Data compiled from records of Tank Car Sec, Freight Traf Br, Traf Contl Div, for statistical history of World War II in preparation. These data vary from those given in annual rpts of Traf Contl Div, and those published in ASF MPR, Sec. 3, Sep 44, p. 63, although compiled from the same records. Average miles per day is computed on basis of all Army-owned cars, whether in active service or undergoing repair or conversion. The Tank Car Br became a section of the Freight Traf Br in Oct 44.

	1942	*1943*	*1944*
Avg. No. of cars owned	2,070	2,988	3,317
Avg. cars in line haul service	1,789	2,662	3,083
Total car miles operated	46,731,943	79,387,826	82,983,500
Avg. miles per car per day	71.6	81.9	73.5
Loaded miles pct. of total	—	51.4	50.5

In its effort to obtain optimum utilization of petroleum tank cars the Tank Car Branch of the Traffic Control Division worked closely with the Petroleum Administrator for War. On the basis of advance notices received from PAW regarding allocations of petroleum products, the branch carefully worked out its plans for the scheduling and routing of cars in order to avoid delays in loading and to minimize deadhead mileage.[32] The chief of the branch was a member of the Tank Car Advisory Committee which was appointed by the Director of Defense Transportation in February 1944 to co-ordinate the utilization of equipment and devise plans for getting the utmost service out of the units available. During the winter of 1944, because of a temporary reduction in the requirements of certain Ordnance plants, the Army was able to loan about three hundred tank cars to ODT to assist in relieving the shortage of fuel oil in the northeastern states. Army tank cars were also used to a limited extent to deliver gasoline and fuel oil to Navy installations.[33]

Repairs to Army tank cars were of two types. Those required by the tanks and their fittings were performed by contractors in shops equipped to do this specialized work. Such repairs were especially heavy during the fiscal year 1945, because of the conversion of 300 petroleum cars to acid cars in order to meet the growing need in that field, the conversion of 100 nitric acid cars to carry other acids and chemicals, and the complete overhauling of 165 cars which, because of age and intensive use, had deteriorated greatly. Except in case of emergency the Tank Car Branch designated the contractors to perform such work. When emergencies arose, the installations to which the cars were assigned or the railroads over which they were moving made the necessary arrangements. Repairs to trucks, frames,

[32] Rpt, Relations Between the Traf Contl Div and Civ Agencies, 22 Jan 45, p. 44, Exhibits B, D, and E, OCT HB Traf Contl Div Rpts.

[33] Memo, CofT for CG ASF, 1 Apr 43, sub: Trans of Aviation Gasoline, OCT 463.7.

brakes, and other strictly railroad features were performed generally by the railroads whose inspectors discovered the need, but in some instances they were performed by Army railroad repair shops. Expenditures for repairs during the fiscal years 1943, 1944, and 1945 were as follows:[34]

Year	*Tank Repairs*	*Railroad Repairs*
1943	$ 45,000	$ 69,000
1944	85,500	139,500
1945	285,000	141,000

Army Hospital Cars

As instrumentalities of the Medical Department, hospital cars were under the supervision of The Surgeon General; as railroad equipment they were under the supervision of the Chief of Transportation. The close co-ordination which existed between The Surgeon General and the Chief of Transportation with respect to the utilization of this equipment will be discussed in the section of this history which deals with the movement of patients. The present discussion is concerned with the design, procurement, operation, and maintenance of hospital cars.

Prior to the emergency, patients moved by rail had been accommodated in regular Pullman cars. As the Army expanded, however, it was foreseen that special types of cars would be needed for the more seriously ill and that the government would have to provide these cars since they were needed solely for military purposes. Accordingly, The Surgeon General obtained approval for the procurement of two unit cars in 1940 and the procurement of four ward cars in 1941.[35] The unit car had a kitchen capable of providing food for 500 patients, a surgical operating room, and staff accommodations, but no beds for patients. The ward car contained 32 beds in two tiers, and had straight aisles and wide side doors to facilitate the handling of litter patients. Both unit and ward cars were obtained by converting existing Pullman sleepers. The Quartermaster General's Commercial Traffic Branch collaborated with The Surgeon General in planning the conversions and arranged with the Pullman Company for the sale and alteration of the cars.[36] The Surgeon General intended that one unit car and two ward cars should be used with each hospital train, together with such Pullman cars as might be required.

After Pearl Harbor it was evident that more hospital cars would be needed. The two unit cars had not proved satisfactory to The Surgeon General, since their kitchen facilities were excessive except on trains carrying large numbers of patients, and there was little need for the surgical facilities. Consequently, no more such cars were ordered and the two which had been procured in 1940 eventually were used as pilot models in developing an improved type. In March 1942 orders were placed for 12 additional ward cars and 6 ward dressing cars, the latter differing from the former mainly in that a dressing table was added in space made available by the omission of two beds.[37] These cars, obtained by converting

[34] Rpt, Traf Contl Div, FY 1945, pp. 9, 10, OCT HB Traf Contl Div Rpts.

[35] Memo, SG for TAG, 6 May 40, sub: Hosp Unit Car; DF, ACofS G-4 for TAG, 31 May 41, sub: Hosp Ward Cars; DF, ACofS G-4 for TAG, 17 Jul 41, sub: Provision of Hosp Ward Cars. All in AG 453 (5-6-40) (2).

[36] OCT HB Monograph 6, pp. 274-76.

[37] Ltr, Pullman Co to SGO, 26 Jan 42, SGO 453.1. Floor plans were prepared by Pullman Co in consultation with SG.

Pullman sleepers, were delivered to the Army in the summer of 1942. The Surgeon General planned to use a unit car or a ward dressing car with 2 ward cars in each train, thus providing for 8 trains.[38]

In view of anticipated heavy casualties in the North African campaign the 24 hospital cars in service when the invasion was planned obviously were inadequate, and measures were initiated in July 1942 to increase the fleet.[39] The Corps of Engineers, which at that time was responsible for railway equipment design and procurement, prepared plans for an "ambulance car," which, in addition to accommodations for staff personnel and 30 patients in three-tier beds, had messing and hospital facilities. The Surgeon General at once registered objection, contending that the utilization of space in the proposed car was uneconomical, that it required too much personnel, that three-tier beds were undesirable, and that kitchen facilities were not required in each car. He considered the types of hospital cars already in use the more practical.[40] The Chief of Transportation, viewing the matter from a railway operating standpoint, liked the proposed ambulance car, since it was self-contained and could be used singly or in full hospital trains.[41] The Commanding General, Army Service Forces, also favored the new type of car. The Surgeon General held to his position, however, and late in November the Chief of Transportation, who earlier in that month had taken over from the Chief of Engineers the responsibility for design and procurement of rail equipment, was directed to obtain 96 ward and ward dressing cars by the conversion process.[42] This provided for a total of 120 Army hospital cars. Since The Surgeon General planned to use one ward dressing car and two ward cars with each train, there were sufficient hospital cars for 40 hospital trains.

While this increment of the hospital car fleet was under consideration, the Chief of Transportation proposed that the conversions be made on lounge cars and other luxury types, instead of withdrawing additional sleepers from regular services where they were sorely needed.[43] Since a broad program for the conversion of so-called luxury cars to standard sleepers was already under way it was not a simple matter to find 96 that could be used for hospital cars, but the task was eventually accomplished.[44] The Chief of Transportation also suggested that baggage cars and superior type boxcars, such as those designed for transporting automobiles, might be improved and equipped to meet the requirements of The Surgeon General. The latter did not favor this proposal, however, unless it should eventuate that no other cars were available.[45]

The decision not to build more unit cars meant that meals on hospital trains would have to be provided from the carriers' regular dining cars, or from baggage cars con-

[38] Ltr, SGO to Development Br Requirements Div SOS, 10 May 42, SGO 453.1.

[39] Memo, ACofS for Opns SOS for CofEngrs, 23 Jul 42, sub: Proposed Rail Ambulance Car; 2d Ind, CofEngrs for CG SOS, 24 Aug 42; 3d Ind, SG for CG SOS, 29 Aug 42. All in SGO 322.2–5.

[40] Rpt of Conf in SGO, 9 Oct 42, sub: Adequacy of Hosp Train Equip, SGO 453.1.

[41] Memo, CofT for ACofS for Opns SOS, 30 Oct 42, sub: Rail Ambulance Car, OCT 531.4 (Hospital).

[42] Memo, ACofS SOS for CofT, 24 Nov 42, sub: Ward Cars (Medical), OCT 531.4 (Hospital).

[43] Ltr, CofT to C. H. Buford Vice Pres AAR, 10 Oct 42, OCT 531.4 Hosp Train; Memo, C of Mvmts Div OCT for CofT, 29 Oct 42, sub: Rail Hosp Trains, OCT 531.4 (Hospital).

[44] Memo, CofT for C. H. Buford Vice Pres AAR, 17 Dec 42, OCT 531.4 (Hospital).

[45] Rpt of Conf in SGO, 9 Oct 42, sub: Adequacy of Hosp Train Equip, pars. 6 and 8, SGO 453.1.

verted to kitchen cars. The converted baggage cars did not prove satisfactory from a sanitary standpoint, however, and even the food served from regular dining cars did not meet The Surgeon General's standards. Furthermore, dining cars operated by the railroads were closed between meal hours and were likely to be cut out of hospital trains overnight.[46] In July 1943 it was therefore decided to construct 40 hospital kitchen cars, using the basic boxcar design which was being used in the construction of 400 troop kitchen cars, with improvements essential to the proper feeding of patients.[47] The contract for the construction of these cars was let by the Chief of Transportation in August and delivery began early in 1944. The plan then was to use one kitchen car and three ward or ward dressing cars in each hospital train.

The cars so far provided were suitable primarily for service in hospital trains where ward cars could be complemented with kitchen or dining cars. In the fall of 1943 The Surgeon General found that there was need for self-contained hospital cars which could be used independently in handling small movements.[48] The Chief of Transportation and The Surgeon General then developed a design which included beds for 36 patients in tiers of three, dressing table, kitchen facilities, and staff quarters. In March 1944 The Surgeon General recommended that 105 of this new type unit car be procured and that buffet kitchens be installed in the hospital cars already in service.[49] The Chief of Transportation recommended that 200 new cars be authorized, in view of the prospective great increase in the movement of patients, but Army Service Forces headquarters followed The Surgeon General's program and sanctioned only 100, together with the installation of kitchens in the existing cars.[50] Although it had been proposed that the additional cars be obtained by conversion, existing passenger equipment was so urgently needed for regular and troop traffic that orders were placed for entirely new cars.

The Chief of Transportation's estimate of the future need was borne out by experience, and early in January 1945 a further order for 100 new type unit cars was approved. Contracts were placed immediately, with the instruction that they be given special attention in order to obtain quickest possible delivery.[51] Soon thereafter The Surgeon General informed the Chief of Transportation that 20 more kitchen cars would be required.[52] The troop kitchen cars procured to fill this order were delivered during February and March. Since the need was so urgent, they were placed in service without undergoing as extensive conversion as

[46] Memo, SG for CofT, 7 May 43, sub: Kitchen Cars for Hosp Trains; Memo, Lt Col Edwin N. Berry for CG 2d SvC, 22 May 43, sub: Evacuation of Patients from Halifax; 4th Ind, 2d SvC to CG ASF, 5 Jun 43. All in SGO 453.1.

[47] Memo, SG for CofT, 29 Jul 43, sub: Kitchen Cars, SGO 453.1.

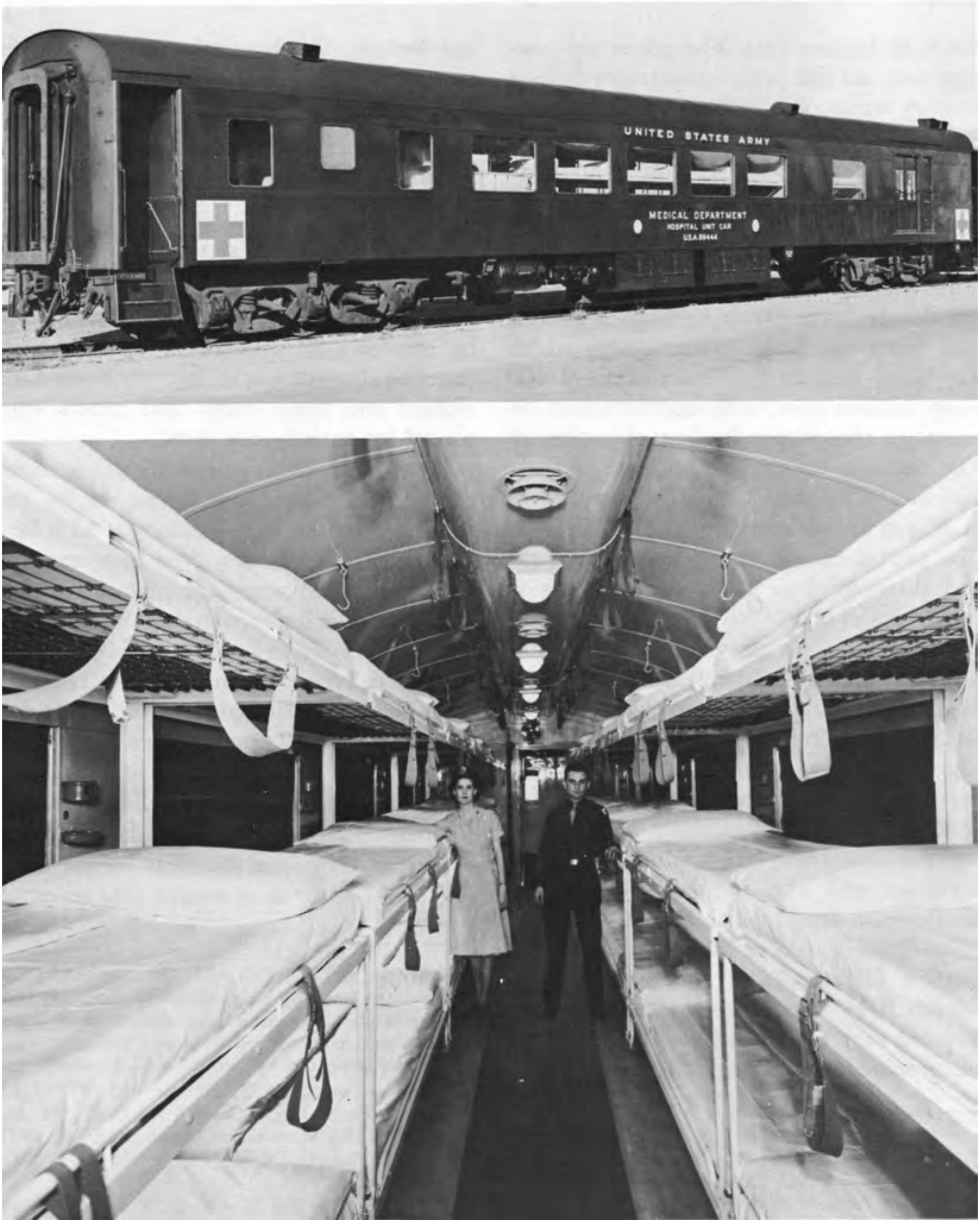
[48] Memo, SG for CofT, 15 Oct 43, sub: Unit Car, New Type, OCT 531.4 Hosp Train.

[49] Memo, SG for CG ASF, 30 Mar 44, OCT 453.9 Hosp Cars. SG's opposition to three-tier beds was relaxed, although it was realized that upper berths could not be used for many patients. They frequently were used by medical staff members.

[50] 2d Ind to CG ASF, 10 Apr 44, OCT 453.9 Hosp Cars; 4th Ind, CG ASF for CofT, 24 Apr 44, OCT 453.9 Hosp Cars; Memo, Rail Div OCT for Dir of Supply OCT, 27 Apr 44, OCT 531.4 Hosp Train.

[51] Memo, Exec for Supply OCT for C of Procurement Div OCT, 4 Jan 45; Memo, C of Prod Expediting Stf for Deputy Dir of Supply OCT, 5 Jan 45. Both in OCT 453.9 Hosp Cars.

[52] Memo, 22 Jan 45, sub: Med Kitchen Cars; 2d Ind, SG for CofT, 26 Mar 45. Both in SGO 453.



ARMY HOSPITAL CAR. *Exterior and interior views of a new type self-contained unit hospital car, 200 of which were built during the war.*

that previously applied to the hospital kitchen cars.

Thus, at the close of the emergency, the Army had 120 ward and ward dressing cars with buffet kitchens, 200 new type self-contained unit cars, and 60 hospital kitchen cars—a total of 380 cars.[53] During the latter part of the war all ward, ward dressing, and unit cars were air-conditioned. The first 24, which were procured during the period 1940–42, did not have air-conditioning equipment initially, but it was installed later.[54]

In addition to the equipment mentioned above, 10 lightweight hospital cars designed for service in Europe were operated for a time in the zone of interior. The designs for these cars had been developed by the Corps of Engineers during 1942 when the procurement of railroad equipment was its responsibility.[55] Early in 1943, on request of The Surgeon General, the Chief of Transportation included 325 such cars in the Army supply program for that year and 105 in the program for 1944. With a view to saving shipping space, however, it was decided that hospital trains for use in Europe would be procured in the United Kingdom.[56] Accordingly, procurement in the United States was limited to one experimental train, consisting of one hospital kitchen-dining car, one officer personnel car, one orderly car, one utility car, and six ward cars. This equipment was standard gauge, but because of its light construction it was not altogether suitable for use on American railroads. After being exhibited at many points across the continent, the train served briefly in the California-Arizona maneuver area and in the Third and Fourth Service Commands. It was shipped to France in October 1944.[57]

It was the policy of the Services of Supply, and later of the Army Service Forces, that hospital cars should be attached to the service commands, but the Chief of Transportation had extensive responsibilities in connection with their operation.[58] He assigned and reassigned the cars to the respective service commands in accordance with advice from The Surgeon General regarding prospective movements of patients. The service commands staffed, supplied, and cleaned the cars while they were in their possession. The service commands allocated the cars to movements originating within their respective areas, except when the movements originated at ports of embarkation, in which case the port commanders called on the service commands for the number of cars needed. The Chief of Transportation made all arrangements with the railroads relating to the movement of Army hospital cars over their lines and for repairs

[53] Memo, Med Regulating Off for Dir Hosp Div SGO, 24 Oct 45, sub: Hosp Car Equip, SGO 453; Statistical Table, Rail Div OCT, sub: Hosp Cars in Interchange Sv, OCT HB Rail Div Hosp Cars, gives contract numbers of all cars, contractors, initial and final costs.

[54] Memo, CofT for CG's of SvC's, 10 Feb 43, sub: Air Conditioning of Hosp Cars, OCT 531.4 Hampton Roads.

[55] Memo, Engr Bd for CofT, 30 Nov 42; Memo, CofT for SG, 8 Jul 43. Both in OCT 531.4 Hosp Train.

[56] Memo, C of Rail Div OCT for ACofT for Supply OCT, 28 Jun 43, sub: Trans Shortages, OCT 531.4 (Hospital).

[57] Rpts, Rail Div, FY 1944, p. 25; FY 1945, p. 21. Both in OCT HB Rail Div Rpts.

[58] Memo, ACofS for Opns SOS for CG's of SvC's, CofT, and SG, 18 Aug 42, sub: Location and Contl of Hosp Trains, OCT 322.15; Pamphlet, ACofS for Opns SOS, sub: Military Hospitalization and Evacuation Opns, pars. 2 and 3, 15 Sep 42, OCT HB Rail Div Hosp Cars; WD Cir 316, 6 Dec 43, pars. 9 and 10, sub: Hospitalization and Evacuation of Pers.

and other services to be performed while the cars were en route.

Initially, because of the absence of explicit directives, the Chief of Transportation, The Surgeon General, and the service commands were not wholly clear as to their respective responsibilities in connection with the maintenance of hospital cars. The Chief of Transportation, however, exercised close supervision over the maintenance of the cars as railroad equipment from the beginning, and in May 1943 he was made solely responsible for maintenance except as regards medical equipment, which was the responsibility of The Surgeon General.[59] This arrangement was necessary to insure that hospital cars, which moved throughout the nation, conformed to the operating standards of the rail lines and received uniform treatment wherever they were. In addition to supervising the maintenance work performed in shops of the service commands, the Chief of Transportation's Rail Division utilized its contacts with the railroad industry to obtain spare parts that were in short supply, arranged for repairs to be performed at Army or other railroad shops when this would expedite the return of the cars to service, and arranged with the railroads that any repairs found necessary while the cars were in their possession would be performed as promptly as possible for the account of the Army.[60] Similarly, the Chief of Transportation arranged for the railroads to furnish supplies for which need developed while the cars were away from their service command bases.

Soon after the Services of Supply announced that hospital cars would be attached to the service commands, the opinion was put forward that they should be attached to the ports of embarkation instead. General Wylie, Assistant Chief of Transportation for Operations, did not concur in that view.[61] He pointed out that while hospital cars would be used extensively in the evacuation of patients from the ports, a large part of their employment would be in connection with movements from one general hospital to another. He considered the service commanders in the better position to provide medical personnel for hospital trains, since they could draw on the general hospitals which were under their control. In his opinion it would be unwise to add to the already broad responsibilities of the port commanders by making them responsible for the evacuation of patients by train. The Chief of Transportation agreed, and recommended that no change be made in the SOS plan in this respect.[62]

The movement of hospital cars and hospital kitchen cars over the commercial rail lines was governed by an agreement between the carriers and the Army, concluded in July 1943.[63] Extensive negotiations preceded the Army's approval of this agreement, and the railroads' tender as finally accepted was not satisfactory to the Chief of Transportation insofar as it related to the hospital cars.[64] He was unsuccessful, how-

[59] Memo, CG ASF for CofT and SG, 13 May 43, sub: Ward Cars and Med Equip Therefor; Memo, Dir of Opns ASF for SG and CofT, 20 May 43, sub: Ward Cars. Both in SGO 453.1.

[60] Rpt, Rail Div, FY 1945, p. 21, OCT HB Rail Div Rpts.

[61] Memo for CofT, 22 Dec 42, OCT 531.4 Hosp. Train.

[62] Memo, CofT for C of Adm Svs SOS, 15 Jan 43, OCT 531.4 Hosp. Train.

[63] Ltr, Interterritorial Mil Com to CofT and corresponding officers of other armed forces, 5 Apr 43; Ltr, DC of Traf Contl Div OCT to IMC, 31 Jul 43. Both in OCT 531.4 Hosp Train.

[64] Ltr, DC of Traf Contl Div OCT to W. C. Kendall, Chm Car Sv Div AAR, 31 Jul 43, OCT 080 AAR; Ltr, CofT to J. J. Pelley Pres AAR, 10 May 45, OCT 531.4 Hosp Train.

ever, in his efforts to induce the railroads either to pay the government a mileage allowance on these cars or to lower the charges for military patients transported in them. Toward the end of the war the railroads agreed to absorb, retroactively, certain of the costs of servicing the cars while they were en route.[65]

Railroad Repair Shops

When the war began the Army was operating two shops for the performance of heavy maintenance on its railroad equipment. Two such shops were added during the hostilities. Peacetime experience had demonstrated that the overhauling of locomotives and locomotive cranes could be accomplished "in a more satisfactory and economical manner" by the Army itself than at shops operated by the locomotive builders or the common carriers.[66] During the war period it was found advantageous to have shops which handled Army work exclusively, since priorities at such shops were entirely under Army control, and it was difficult to get work performed promptly at commercial shops because of their heavy backlog and the shortage of skilled personnel.

Prior to 1937 railroad repair shops had been operated at Fort Benning, Ga.,. an infantry post, and Fort Monroe, Va., a coast artillery station. These shops were under the direct control of the post commanders, but the technical aspects of their work were supervised by The Quartermaster General's Commercial Traffic Branch.[67] That branch controlled the funds and decided when and where repair work was to be done. Early in 1937 the Army decided to transfer the Fort Monroe shop to the Holabird Quartermaster Depot, Baltimore, and make that the main installation for railroad repairs. Several factors contributed to the decision. Holabird was near large commercial railroad shops, which would facilitate the procurement of spare parts and technical personnel; it was relatively near the large eastern military posts which employed a considerable part of the Army's railroad equipment; it was a quartermaster post, and The Quartermaster General saw advantages in having control of the housing, equipment, and operation of the shop, in addition to supervision of the work it performed. The shop at Fort Benning was continued on a limited basis.

During 1940 and 1941, with the growth of the military establishment and the addition of many units of utility railroad equipment, the shops at Holabird and Benning took on added importance and required considerable expansion. In March 1942 they came under the supervision of the Chief of Transportation, who at that time succeeded to the transportation responsibilities of The Quartermaster General.[68] Early in 1944, in view of the large amount of Army railroad equipment employed in the area, the railroad repair shop at the Ogden Arsenal, Utah, which had been operated by the Ordnance Department, was placed under the supervision of the Chief of Transportation. Effective 1 June 1944, a shop of the New York Central Railroad at Bucyrus, Ohio, which had been used by the

[65] Ltrs, C of Rail Div OCT to C. H. Buford Vice Pres AAR, 16 and 30 May 45, OCT 080 AAR; Ltr, AAR to C of Rail Div, 30 Jun 45, OCT HB Rail Div Hosp Cars.

[66] Memo, Middleton for C of Trans Div OQMG, 2 Nov 36, sub: Transfer of Locomotive Shops, QM 635 T–R (Holabird), OCT HB Zones Gen RR Repair Shops.

[67] OCT HB Monograph 6, pp. 47–48.

[68] Rpt, Rail Div OCT, FY 1943, p. 12, OCT HB Rail Div Rpts; AR 55–105, par. 2h, 29 Dec 42.

Fifth Service Command under contract for the training of shop battalions for the Military Railway Service, was transferred to the Chief of Transportation, to be operated for the dual purpose of repairing Army railroad equipment and training railway troops.[69]

Just as The Quartermaster General had found it advantageous to control the facilities and personnel of the railroad repair shops rather than have them under the control of other services, so the Chief of Transportation concluded that divided responsibility was not a good arrangement. A representative of the Director of Supply, Army Service Forces, who inspected the shops reported that they were not being utilized to capacity and recommended that they be placed under the sole direction of the Chief of Transportation, who then would be in a position to work out a scheduling plan that would assure maximum results.[70] This was done, effective 1 May 1944. The Chief of Transportation became a tenant of the stations where the shops were located. To avoid duplication of personnel and effort, the station commanders retained responsibility for administrative functions which were common to the stations as a whole, including general housekeeping. Thenceforward the Chief of Transportation issued all instructions necessary to the operation of the shops, as well as those relating to the maintenance and repair of equipment. The designation of the facilities then was changed from Army railroad repair shops to Transportation Corps railroad repair shops.

Although the Rail Division in Washington exercised broad supervision over the policies and procedures affecting the railroad repair shops, direct control of their organization and operation was assigned to the zone transportation officers in whose territories they were located.[71] The staff of each zone included a railroad officer and a master mechanic, who gave these matters their special attention. In addition to performing third, fourth, and fifth echelon (heavy) maintenance on Army-owned railroad equipment employed within a radius of 400 miles, the shops were expected to perform first and second echelon (light) maintenance for equipment domiciled at the stations where they were located. They were under the supervision of commissioned officers, but the operating personnel was civilian, except at Bucyrus where use was made of enlisted men who were undergoing training there.

Installations operating railroad equipment were expected to perform heavy maintenance to the extent of their capacity.[72] Few of them, however, had the facilities and personnel necessary for such work, and it remained for the Chief of Transportation to determine whether the equipment would be sent to Transportation Corps repair shops or commercial shops. The zone transportation officers submitted recommendations in this regard, and decisions were made by the Rail Division which controlled the funds. The location of the equipment and the cost of deadheading it to a distant Army shop were important considerations in determining where the repairs would be made. Although the limited capacity of the Army shops necessitated the allocation of some jobs to commercial shops, by virtue of

[69] ASF Cir 133, Sec. III, 10 May 44.

[70] Memo, CofT for 3d, 4th, and 5th ZTO's, 10 Feb 44, sub: Adm of RR Repair Shops, OCT 635; Memo, Dir of Supply ASF for TAG, 8 Apr 44, AG 635 (8 Apr 44) (1); ASF Cir 100, Sec. III, 12 Apr 44.

[71] TC Cir 5–13, 28 Apr 44, sub: Opn of Army RR Repair Shops.

[72] WD Cir 447, Sec. VII–3, 24 Nov 44.

careful scheduling they were able to handle the larger part of the Army's repair work originating within an economical radius.

The most important task of the Transportation Corps shops was the performance of heavy repairs on locomotives and locomotive cranes. They also rehabilitated various types of cars which were used on the utility railroads. Although during the early part of the war tank cars frequently were sent to the Army shops for the repair of frames, trucks, and other railroad features, this type of equipment was later allocated consistently to commercial shops. Hospital cars also were assigned to the railroads or to the car builders for heavy repairs. During the fiscal year 1945 the Transportation Corps shops repaired 239 units of equipment, at a total cost for labor and materials of $376,160.[73]

In order to get better control of stocks and reduce inventories, the four railroad repair shops were designated as parent stations for the distribution of spare parts and maintenance supplies.[74] Army installations throughout the continental United States were required to requisition such matériel from the shops to which they were assigned as "satellites." The parent stations established stock levels, originally determined by the zone master mechanics and later based on experience. The satellite stations were directed to order replacement parts as they were needed for immediate use or for the replenishment of the model stocks which accompanied each locomotive. Other supplies were to be requisitioned according to allowances established by the Chief of Transportation, or to meet actual needs when the allowances proved inadequate. Local purchases were permissible only in cases of emergency, and then only with the approval of the zone master mechanics.

Late in 1944 a mobile repair unit was attached to the Holabird shop. Although it immediately proved its value, requisitions for additional units were not promptly allowed and the other shops did not acquire them until after V-J Day.[75] The mobile units were small but well-equipped machine shops mounted on trucks. Each had a normal crew of six men. Their justification lay in the fact that frequently it was cheaper to dispatch a mobile unit to the installation where repairs were needed than to deadhead the locomotive or car to the parent shop and back again. This procedure also relieved the overburdened rail lines of nonproductive traffic. The mobile shops were found especially valuable in the maintenance of diesel locomotives assigned to posts which lacked the facilities or the experienced personnel for this work.

The Holabird repair shop, in addition to the work outlined above, was used for the inspection and repair of railroad equipment returned from overseas. Because of its location at the seaboard, this shop was well suited for the purpose. Late in 1944 a shipment of knocked-down cars, returned from Europe because of damage, was inspected at the Holabird shop prior to being forwarded to the manufacturers for rehabilitation.[76] After the war, locomotives shipped back from the Persian Gulf Command and the European theater were inspected at Holabird, and some of the necessary recon-

[73] For details of repairs accomplished see annual reports of Rail Div FY 1943, 1944, 1945, OCT HB Rail Div Rpts.

[74] WD Cir 447, Sec VII–6, 24 Nov 44.

[75] Rpt, Rail Div, FY 1945, incl 7, OCT HB Rail Div Rpts; Memo, CofMRS Div OCT for ACofT, 25 Jul 46, sub: Opn of RR Repair Shops, OCT HB Wylie Rail Trans.

[76] Rpt, 3d TZ, 4th Quarter 1944, OCT HB 3d Zone.

ditioning was done there. Most of these locomotives were reshipped to Korea and Alaska.

Motor Buses for Local Transportation

Early in the war it was foreseen that the provision of adequate local transportation to meet the needs of workers at Army installations and war plants would become a serious problem. It was anticipated that shortages of gasoline, tires, and replacement parts would prevent the daily operation of many private automobiles on which a large percentage of industrial workers relied.[77] The local passenger services of the railroads were expected to undergo curtailment rather than expansion, because of the need for their equipment in intercity service. It was uncertain to what extent additional commercial motor bus service could be provided, because of the scarcity of equipment and personnel. With these considerations in mind, the Director of Defense Transportation established a Division of Local Transport in February 1942 and to assist the new division formed an advisory committee, which included representatives of the Army, the Navy, and other federal agencies.[78]

The Army soon encountered this problem at some of its more isolated posts, camps, and stations where the public transportation services were inadequate. The movement of military personnel to and from such installations was wastefully slow, and civilian workers were tempted to seek new jobs if they were required to spend long periods en route each morning and evening. In order to have a complete and accurate picture of the situation, corps area commanders were directed in March 1942 to have surveys made at all installations affected and to submit detailed reports regarding each case.[79] The task of analyzing these reports was assigned to the Chief of Transportation. His Highway Division engaged a number of experts for the work, and soon established a Transportation of Persons Branch to deal with all aspects of the problem. By 20 June 1942 reports covering 373 installations had been considered, and 41 posts had been visited in order to deal with conditions requiring immediate correction.[80] The solution most promptly available was to work out a better utilization of equipment already in service in the respective localities, but it was foreseen that the need for additional equipment was imminent. The chiefs of the technical services were requested to bring such problems to the attention of the Chief of Transportation as early as possible, in order that action might be taken before the situation became critical.[81]

Prompt steps were taken by the Chief of Transportation to build up a pool of Army-owned buses to meet what was expected to develop into a heavy demand from Army installations. Since the discontinuance of automobile production had left a large part

[77] A test check late in 1942 covering 94 plants in 10 states with 140,000 employees, showed that 73 percent traveled to and from work in private automobiles. Ltr, Chm Hwy Traf Advisory Com to SW, 27 Jan 43, OCT 510 Furnishing Trans to Govt and Other Pers.

[78] Ltr, ODT to Col Gross, 9 Feb 42, and Reply, 10 Feb 42, OCT 000.900 Def Trans.

[79] Ltr, CG SOS for corps areas, 18 Mar 42, sub: Survey of Trans Facilities, OCT 510 Furnishing Trans.

[80] Rpt, Hwy Div, 1 Jul 41 to 20 Jun 42, pp. 3–4, OCT HB Hwy Div Rpts.

[81] Memo, C of Hwy Div OCT for C's of Tech Svs, 1 Jul 42, sub: Trans Facilities for Def Workers, OCT 510 Furnishing Trans.

of the fleet of two-deck auto haulers without immediate employment, the Highway Division developed a plan for the conversion of these vehicles into passenger carriers and in June 1942 obtained authority for the procurement of 1,500 for that purpose.[82] Concurrently the Services of Supply announced a policy to govern the utilization of this equipment. The buses were not to be used exclusively for intrapost service. They were to be provided only when existing transportation facilities were inadequate and could not be augmented by other means. Allocations were to be made by the Chief of Transportation only after the need had been established by a field survey. In view of the shortage of construction materials, new buses were not to be ordered until it had been clearly determined that the 1,500 converted vehicles would not meet the requirements.

While the impact of this problem was felt first at Army posts and contractor-operated plants, similar conditions existed at many private plants which were engaged in the manufacture of war matériel. Although the Army had no authority to provide buses in such cases, the Chief of Transportation considered the problem within this field of interest. The first step in meeting it, his highway experts believed, was to stop the wasteful use of existing resources, particularly tires, through unnecessary driving of private automobiles. They were of the opinion that the Office of Defense Transportation had the necessary authority, but this agency showed no disposition to undertake the control of private driving.[83] Accordingly, a memorandum for the President was drafted, which emphasized the importance of conserving tires, advocated nation-wide gasoline rationing as the best means of accomplishing that result, and proposed that the Office of Defense Transportation assume the task.[84] The memorandum was not signed, however, and General Somervell returned it to General Gross with the notation that the matter was "being handled otherwise." Emergency gasoline rationing had been introduced in seventeen eastern states on 15 May because of the reduction of gasoline stocks caused by submarine action against coastwise tankers, and a permanent coupon system was placed in effect in that area by the Office of Price Administration on 22 July; nation-wide rationing with the avowed purpose of conserving rubber did not begin until December 1942.[85]

The Chief of Transportation attacked the problem also from the standpoint of rubber output. Regardless of how well tire conservation might be practiced, replacements would be needed. There were many other demands for synthetic rubber, and Col. Frederick C. Horner, chief of the Highway Division, lost no opportunity to keep the transportation need clearly before the authorities. The unhappy situation which had existed in the field of synthetic rubber production, because of competing demands for basic materials and the absence of clearly

[82] Memo, CG SOS for QMG, 15 Jun 42, sub: Purchase and Conversion of Auto Truck Carriers; Memos, DCofS for Requirements and Resources SOS for CG SOS, 27 Jun 42, and for CofT, 29 Jun 42, sub: WD Policy for Purchase of Buses. All in OCT 451.1 Buses.

[83] EO 9156, 2 May 42, expressly directed ODT to include within its authority and responsibility "all rubber-borne transportation facilities, including passenger cars . . . ."

[84] Memo, Gross for Somervell, 9 Jul 42, sub: Trans of War Plant Employees, with draft of Memo, SW for the President; Pencil Memo in reply, Somervell for Gross. Both in OCT 510 Furnishing Trans.

[85] 2d and 5th Quarterly Rpts, OPA. Rationing of new tires had begun in December 1941.

defined responsibilities, led to the appointment by the President of the Rubber Survey Committee, under the chairmanship of Bernard M. Baruch, on 6 August 1942. Colonel Horner immediately placed the transportation aspects of the rubber problem before that committee.[86] The support of the Army and Navy Munitions Board was sought in an effort to make sure that the tire problem was fully understood in its relationship to the manufacture of munitions.[87] The committee, it may be noted, in a report rendered on 10 September 1942, took generous cognizance of the transportation need in relation to both rubber conservation and new production. On 17 September, in accordance with a Presidential directive, the chairman of the War Production Board appointed Mr. William M. Jeffers to serve as Rubber Director, and broad attack on the problem of synthetic rubber output was begun.[88]

Concurrently the Chief of Transportation inaugurated a plan to enlist the assistance of private plant operators in the tire conservation project. In August 1942, in order to obtain experience on which to base a permanent arrangement, the Chief of Ordnance was requested, through Services of Supply headquarters, to select fifty manufacturers and The Quartermaster General to select twenty-five, at whose plants the plan would be tested.[89] Under the plan each manufacturer first surveyed all conditions affecting the transportation of employees to and from his establishment. From the data developed, the manufacturer and a representative of the Army prepared a program to facilitate pool riding, to assist employees in obtaining gasoline, tire recaps, and other services, and to encourage the economical use of automobiles by any other means. This program then was incorporated in a contract under which the manufacturer agreed to establish a transportation department to administer the program and the Army agreed to pay its pro rata share of the cost of the survey and the operation of the plan, based on the distribution of the manufacturer's business between the War Department and others.[90] The trial proved satisfactory, and early in 1943 the plan was elaborated and made available on a voluntary basis to all private contractors who had one hundred or more employees and who manufactured matériel for the Army Service Forces and the Army Air Forces.[91]

During the fall of 1942 small numbers of used buses which became available from various sources were acquired by the Army to supplement the 1,500 auto haulers already authorized. A study of future requirements, however, indicated that a considerable expansion of the bus pool would be necessary in order to meet the needs of War Department installations for local transportation. The Chief of Transportation therefore recommended that approval be

[86] Memo, Somervell for USW, 17 Aug 42, OCT 510 Furnishing Trans.

[87] Memo, USW for Chm ANMB, 17 Aug 42, sub: Highway Trans and the Rubber Problem, OCT 510 Furnishing Trans.

[88] Office of Rubber Director, Prog Rpt 1, 30 Sep 42.

[89] Memo, CG SOS for CofOrd and QMG, 22 Aug 42, sub: Trans of Employees to and from War Plants, Incl 3a in Documentation of Operations and Liaison Activities with Federal Agencies Related to the Transportation of Persons, OCT HB Hwy Div Trans of Persons.

[90] ODT and WPB approved of the plan and recommended that it be tried also by Navy and Maritime Commission. See Memo, DCofT for CofT, 23 Sep 42, OCT 510 Furnishing Trans.

[91] Rpt, Hwy Div, FY 1943, p. 3, OCT HB Hwy Div Rpts; Memo, CG SOS for C's of Supply Svs, 16 Dec 42, sub: Trans of Employees, OCT 510 Furnishing Trans; ASF Memo, S5–84–43, 7 May 43, sub: Ride Sharing Insurance Covering Trans of Employees to and from War Plants.

given for the procurement, as the need might arise, of used and new equipment to provide 4,000 additional buses.[92] The commanding general of the Services of Supply authorized the Ordnance Department to procure this equipment, upon indication by the Chief of Transportation that the need existed. Provision of funds for the purchase and conversion of this equipment was an Ordnance responsibility; the Chief of Transportation provided the operating funds.

The War Department had no authority to incur expense in providing local transportation for civilian workers at private war plants, and its authority to incur expense in connection with the transportation of military personnel and civilian employees between their homes and Army installations was in doubt.[93] Consequently the War Department took active interest in a bill, proposed by the Navy for introduction in the United States Senate, which expressly granted such authority.[94] This bill was passed by Congress and approved by the President, 1 December 1942. It authorized the Secretary of War, the Secretary of the Navy, and the Chairman of the Maritime Commission to provide means of transportation for persons employed by such agencies or by private plants engaged in the manufacture of war matériel, when such action was considered necessary in the prosecution of the war. Equipment for this purpose might be leased or chartered to private or public carriers, to be operated under terms prescribed by the federal agency concerned. In each instance a determination of the Office of Defense Transportation was required, to the effect that the existing facilities were not and could not be rendered adequate by other means. Each agency was required to make a report to Congress annually, summarizing the operations undertaken in accordance with the law.[95]

In addition to the powers conferred upon it by the Act of 1 December 1942, the authority of the Office of Defense Transportation in connection with local passenger transportation was broadened by an executive order issued early in January 1943.[96] This order designated ODT as the agency to advise and assist federal departments and agencies, state and local governments, and private organizations in surveying the need for and planning the provision of transportation for the movement of personnel to and from war plants and establishments. ODT was also given authority to review all contracts or arrangements made by federal departments or other agencies, except common carriers, for the purchase, lease, requisition, or use of new or used local passenger transportation equipment.[97] An ODT general order then was issued to implement the act and the executive order, which fully outlined the authority of that agency and the procedures to be followed in providing

[92] Memos, CofT for CofS SOS, 1 Sep 42 and 2 Nov 42, sub: Acquisition of Buses, Trucks, and Passenger Cars; Memo, CofS SOS for CG SOS, 5 Nov 42, with latter's endorsed approval; WD Memo W55-10-42, 10 Dec 42, sub: Approval of Requests for and Allocations of Buses. All in OCT 451.1 Buses.

[93] Memo, Legal and Fiscal Div OCT for Hwy Div, 20 Sep 42, OCT 510 Furnishing Trans; see also WD Cir 80, par. 2, 20 Mar 43.

[94] S 2740, 27 Aug 42; Ltrs, SW to Dir Bureau of the Budget, 23 Jul 42 and 27 Nov 42, OCT 510 Furnishing Trans; PL 779, 77th Cong.

[95] See WD Rpts for 1943, 1944, 1945, OCT HB Hwy Div Trans of Persons. Rpts deal only with Class A operations, to be defined later.

[96] EO 9294, 4 Jan 43.

[97] Equipment required for the movement of military and naval personnel when on maneuvers, on trips made under orders, or on other special operations necessary for the prosecution of the war was exempted from this order.

federal-controlled transportation equipment for local passenger services.[98]

The War Department established its basic procedures under the act and the ODT order in two directives.[99] Four general situations were recognized, in which transportation aid might be furnished: (1) when only a shortage of equipment was involved transportation might be furnished by the lease or charter of Army-controlled equipment to public or private carriers, to the Army exchange, or to other persons or concerns capable of rendering the required service; (2) when there was adequate equipment but the local conditions necessitated some form of government assistance, this assistance might be furnished by agreement with a public or private carrier; (3) when both a shortage of equipment and unfavorable local conditions were involved, either or both of the above methods of assistance might be applied; (4) when the above arrangements could not be made satisfactorily, direct government operation of transportation equipment might be introduced. Two general classes of service were recognized: Class A, to provide transportation between employees' homes and places of employment (Army installations or private plants) under the provisions of the act; Class B, to provide official transportation within or between Army installations, or between installations and near-by towns or areas, as authorized by the ODT general order but not by the act. The Chief of Transportation was made responsible for developing the specifications of buses to be procured and for allocating them to private operators or Army installations according to the need. He was designated representative of the War Department to deal with the Office of Defense Transportation in such matters and also was vested with authority to issue any additional rules or regulations that might be found necessary. The commanders of the service commands were delegated authority to sign contracts with bus operators on behalf of the Chief of Transportation when the plans of operation were in accordance with standard plans approved by him.

The Chief of Transportation aimed to build up the bus pool from existing equipment insofar as possible, in order to avoid adding unnecessarily to the heavy burden of the automotive production facilities.[100] When it was necessary to procure new vehicles, he favored ordering types that would require a minimum of critical materials, and his Highway Division developed several designs with this object in view.[101] Because of the heavy demand for all types of motor equipment, the number of used vehicles that could be acquired by transfer was limited, and most of those obtained by this method were the auto haulers referred to above.

The number of Army-controlled buses actually in service reached a peak of 7,244 in August 1945. Of that number 7,050 were owned by the Army and 194 were chartered.[102] Of the Army-owned vehicles, the

[98] ODT GO 35, 17 Mar 43.

[99] WD Cir 80, 20 Mar 43; WD Memo W55-15-43, 27 Apr 43. Slight revisions were introduced by WD Cir 397, Sec. IX, 9 Oct 44; TM 55-705, July 1945, sub: Furnishing Bus Trans; and AR 55-90, 10 Aug 45, sub: Bus Trans.

[100] Ltr, SW to ODT, 20 Oct 42; Memo, C of Hwy Div for DCofT, 29 Dec 42, sub: Need for Clarification of Policy. Both in OCT 451.1 Buses.

[101] Memo, CofT for CofS for Matériel SOS, 10 Feb 43, OCT 451.1 Buses.

[102] Tabulation, Highway Transport Sv Div, OCT, Number and Types of Buses Used in Class A and Class B During the Period December 1942–June 1947, OCT HB Hwy Div Trans of Persons. The data are as of the end of the month.

ARMY BUSES FOR LOCAL TRANSPORTATION. *Tractor-trailer buses taking workers home from the Edgewood Arsenal, Md. (top). Enlisted men boarding Army-owned buses at Fort Hamilton, N. Y. (bottom).*

following three types predominated:[103] The *tractor-trailer bus* was the converted auto hauler. The reconstruction of the body was accomplished largely with wood and noncritical metals, so that each vehicle yielded a net of 1,420 pounds of steel to the nation's salvage drive. After conversion each trailer seated 45 passengers and could accommodate almost an equal number standing. Although the procurement of 1,500 units was authorized, only about 1,200 trailers could be obtained. In August 1945 there were 998 of this type in service. The *body-on-chassis bus* was obtained by installing a bus body, constructed chiefly of wood and noncritical metal, on a truck chassis. Only 1,500 pounds of steel were used, compared with 4,000 pounds used in a similar prewar bus. This vehicle was built in two sizes, seating 29 and 37 passengers. There were 5,142 in service in August 1945. The *war-worker coach* was obtained by installing a small bus body on a sedan chassis. In this manner the seating capacity of the unit was increased from 5 to 15, with the addition of only 400 pounds of critical material. There were 910 buses of this type in service in August 1945.

In providing bus service to meet varying local conditions, under terms as favorable as possible to the government, seven different arrangements were worked out.[104] (1) Government-owned buses were leased to private operators, at rates of 2 cents or 3½ cents per bus mile, according to the vehicle. The operator was responsible for operating and maintenance costs and retained all fares collected. (2) Government-owned buses were leased to private operators on the above terms, but a subsidy was paid to insure the operator a reasonable profit. This arrangement applied where a low fare was necessary in order to avoid a heavy turnover of employees at isolated plants and installations. Sometimes a subsidy was paid to operators on services maintained with their own vehicles. (3) Government-owned buses were leased to Army post exchanges on the terms indicated above. (4) Government-owned buses were operated in public service by Army personnel, when other satisfactory operators could not be found. In this case the operating revenues were deposited to the account of the United States Treasury, and the cost of operation and maintenance was paid from funds provided by the Chief of Transportation. (5) Government-owned buses were operated by Army installations solely for the use of personnel traveling on official business within, between, or around such installations. No fares were charged in this instance, and operating funds were provided by the installations. (6) Government-owned buses were operated by Army personnel for the use of Army personnel moving under official orders, as in the case of movements to maneuver areas, general hospitals, rehabilitation camps, and redistribution centers. No fares were charged and funds for operating and maintaining the vehicles were provided by the posts to which they were assigned. (7) Privately owned and operated buses were chartered by the government at a rate per mile or per trip, based on the operator's costs. This was in effect a subsidy arrangement, made when privately owned equipment was available but when local conditions made it impossible to charge fares that would justify commercial operation.

Requests for relief of transportation deficiencies in the vicinity of Army installa-

[103] Descriptions based on Rpt, Hwy Div, Development of Special Vehicles, 23 Mar 44, OCT HB Hwy Div Rpts.

[104] Rpt, Hwy Div, FY 1945, pp. 5–6.

tions were originated by the commanders of the installations. Requests on behalf of private war plants were originated by the technical services principally concerned. In either case the request was submitted to the commander of the appropriate service command, who had the local conditions investigated, and, if the need for government buses were established, had a plan drawn for the operation of such buses.[105] The investigation was made by a member of the staff of the zone transportation officer, except when an Army Air Forces' installation was concerned, in which case it was made by a representative of the AAF traffic organization. After approval by the service commander, the plan was reviewed by the zone transportation officer, who made such further investigation as seemed necessary and obtained concurrence of the local representative of the Office of Defense Transportation. The entire case then was forwarded to the Chief of Transportation, who obtained final approval of ODT headquarters and the issuance of an ODT certificate of authority. Upon receipt of this authority, the Chief of Transportation requested the Chief of Ordnance to assign vehicles from the Army pool, and, in case it was to be a contract operation, requested the zone transportation officer to have the appropriate contract form executed.[106]

The Chief of Transportation was guided largely by the judgment of the zone transportation officers in allocating buses and controlling operations. He issued instructions for their guidance in determining the need of a locality and the extent to which commercial services could be relied on for satisfaction of the need, and he prescribed contract forms for their use in establishing services with Army-owned equipment, but the zone transportation officers were the judges of local conditions and their recommendations usually governed.[107] They also policed the operations, ascertained that the agreed fares were being charged and that proper maintenance was being provided. They arranged for the return of vehicles to the pool when they no longer were required in the services to which they were allocated. The location of buses was changing continually, as evidenced by the fact that during the fiscal year 1945 a total of 2,624 was returned to the pool and most of them were reallocated promptly.[108] The zone transportation officers were responsible for obtaining detailed monthly reports from contract operators of Army-owned vehicles, showing the nature and extent of each service and giving a financial accounting. It was part of their task to see that buses allocated to Army installations for operation by their personnel were kept in the services for which the allocations were made.[109]

The demand for Army buses was fluctuating, and reallocations were frequent. During the fiscal year 1945, for example, of a total of 5,282 buses placed in the pool, 2,658 were newly acquired and 2,624 were returned from previous assignments. In adding new vehicles to the pool the Highway Division had to take this turnover into account, while at the same time allowing for

[105] Memo, C of Hwy Div for Exec Asst OCT, 18 Jan 45, OCT HB Hwy Div Rpts.

[106] For these standard contract forms, see attachments to Memo, C of Hwy Div for Exec Asst to DCofT, 16 Dec 42, OCT HB Hwy Div Trans of Persons.

[107] See WD Memo W55-15-43, 27 Apr 43, Apps. A, B, C. For example of ZTO investigation and recommendation, see Memo, 9th ZTO for CofT, 13 Mar 43, sub: Utah QM Depot, OCT 532 9th Zone.

[108] Rpt, Hwy Div, FY 1945, p. 4, OCT HB Hwy Div Rpts.

[109] See Memo, CofT for CofOrd, 26 Jun 43, sub: Redistribution of Buses, OCT 451.1 Buses; Memo, CofT for 5th ZTO, 12 Feb 44, OCT 532 5th Zone.

exceptional demands which might arise because of severe weather or other unforeseen circumstances. At the end of August 1945, when there were 7,050 Army-owned buses in service, there were 473 in the pool awaiting allocation.[110]

The majority of the buses were allocated for Class B services, which provided official transportation in connection with Army installations. The Class A services were highly important, however, since they often enabled isolated war plants to hold their employees. To illustrate: the Badger Ordnance Plant, at Baraboo, Wis., utilized 126 Army buses to assemble its peak force of about 14,000 employees from 103 communities, which were scattered over a radius of 75 miles.[111] Of the 7,050 Army buses in service at the end of the war, 1,746 were in Class A services and 5,304 in Class B.

The zone transportation officers were not basically responsible for the maintenance of Army buses, but they were instructed to report any cases of neglect that might come to their attention.[112] As regards buses operated by Army installations, responsibility for maintenance rested with the commanding officers of the installations, who were governed by Army regulations pertaining to motor vehicles and were required to make regular inspections of the equipment. As regards buses leased to public carriers, the responsibility rested with the carriers, who were required to maintain the vehicles according to the standards of the industry. Commanders of the service commands were instructed to have such vehicles inspected periodically and to notify the appropriate Army contracting officer of any instance of neglected maintenance in order that corrective measures might be taken under the contract. When lack of proper maintenance was due to inability of the carrier to obtain replacement parts, tires, or labor, a supplemental contract could be made, under which service command facilities would perform all third, fourth, and fifth echelon maintenance at a mutually agreed rate.[113]

Administrative Vehicles

In addition to the tactical motor vehicles assigned to troop units and Army installations in the zone of interior, and the buses dealt with in the preceding section, many trucks, trailers, semitrailers, passenger cars, ambulances, motorcycles, bicycles, and motor scooters were used by posts, camps, and stations in carrying out their responsibilities. These were designated administrative vehicles. The Chief of Transportation had no responsibility for such vehicles until June 1945. At that time he was given extensive functions in connection with equipment assigned to Class I, II, and IV installations, which numbered more than 120,000 units of 29 types. Administrative vehicles assigned to the Army Air Forces (Class III installations) remained exclusively under AAF control.

Prior to June 1945 the Army Service Forces had exercised only a loose control over administrative vehicles.[114] Issuance of

[110] Annual Rpt, Hwy Div, FY 1945, p. 4, OCT HB Hwy Div Rpts; ASF MPR, Sec. 3, Aug 45, p. 12.

[111] Memo, 6th ZTO for OCT, 18 Sep 45, p. 5, sub: Accomplishments and Handicaps, OCT HB 6th Zone.

[112] Memos, CofT for ZTO's, 1 Oct 43, sub: Maintenance of TC Buses, and 3 Jan 44, sub: ASF Cir 154, OCT 451.1 Buses—Maintenance.

[113] ASF Cir 154, Sec. II, 18 Dec 43.

[114] Conf, author with Lt Col John Bergmann Exec of Hwy Div OCT, 3 Aug 45, OCT HB Hwy Div Adm Vehicles; Memo, C of Hwy Div for CofT, 9 Oct 45, sub: Rpt on Accomplishments and Handicaps, OCT HB Hwy Div Rpts.

vehicles by the Ordnance Department was authorized by the Distribution Division, ASF, in accordance with requisitions from the service commands, which distributed the vehicles to the installations within their respective areas. There were no ceilings for individual installations, and when demand exceeded supply horizontal cuts were made, which, although of no consequence to some installations, worked a serious hardship on others. Since no complete central record was maintained, redistribution of vehicles in accordance with actual requirements entailed special surveys.

Even when the Chief of Transportation was without specific responsibility in connection with administrative vehicles, his Highway Division, because of its general interest in the conservation of motor equipment, had proposed measures to improve the situation. At its suggestion a system of identification was adopted in May 1944 to aid inventory control.[115] In March 1945 the division made a study of administrative vehicle problems at ports of embarkation, which at that time were operating more than 10,000 units.[116] It reported that under the existing system the service commands frequently were not able to assign to the ports the types of vehicles requested, with the result that many vehicles were misfits and could not be used with maximum effectiveness. Also, since a large number of vehicles were in bad condition when received, repairs were necessary before they could be put into service and the vehicle disability rate of the ports was raised accordingly. The Highway Division recommended that administrative vehicles for use at ports of embarkation be standardized to seven types; that the Highway Division be authorized to determine the requirements of the ports for each type; that the Chief of Transportation endeavor to obtain exemption from the plan of allocating vehicles through the service commands and to secure authority to set up a pool of administrative vehicles under his direct control; and that the Highway Division be designated the agent of the Chief of Transportation to control the assignment and utilization of such equipment.

The improvements which the Highway Division had visualized as desirable for the Transportation Corps were placed in effect for all Army Service Forces installations soon after the rendition of its report. In May 1945 the War Department listed the types of vehicles to be considered in the administrative fleet, pointed out that the number then available was not adequate to meet all requirements, and charged the commanding general of the Army Service Forces (also the commanding general of the Army Air Forces) with establishing a suitable allowance for each installation or activity under his control, making quarterly proposals for the revision of allocations, and enforcing all practical measures for conservation and effective utilization.[117] This was followed by an ASF directive which outlined in detail the responsibilities for the allocation and control of administrative vehicles under the jurisdiction of that headquarters.[118]

Under the latter directive the Chief of Transportation was given staff supervision over the allocation of vehicles by the service commands to Class I, II, and IV installations. The service commands established the requirements of such installations, ordered

[115] Rpt Hwy Div, FY 1944, p. 4, OCT HB Hwy Div Rpts; ASF Cir 127, Sec. III, 6 May 44.

[116] Memo, C of Hwy Div for CofT, 19 Mar 45, sub: Adm Vehicles Assigned to PE's, OCT HB Hwy Div Adm Vehicles.

[117] WD Cir 139, Sec. III, 10 May 45.

[118] ASF Cir 178, Sec. III, 21 May 45.

vehicles assigned to them, and determined the extent to which the equipment was being utilized, but they were required to submit monthly reports on these matters to the Chief of Transportation and such special reports as he might require. The Chief of Transportation established allowances for the respective service commands, determined when such allowances should be increased or decreased, and prescribed policies and procedures to be followed by the service commands in making allocations to individual installations. In addition to this supervision of the service commands, the Chief of Transportation was given direct control of the allocation and utilization of administrative vehicles required by government-owned contractor-operated plants, military construction projects, and other special projects which were exempt from service command jurisdiction. In these cases, the Chief of Transportation worked in direct co-ordination with the technical services concerned.

With respect to the plants and projects under the direct control of the Chief of Transportation, responsibilities were divided between his Highway Division and the zone transportation officers.[119] Separate instructions were issued with respect to Corps of Engineers construction projects, ammunition manufacturing plants, Ordnance installations, and Chemical Warfare installations, but the following arrangements applied in all cases: Requests for administrative vehicles were made by the commanding officers of the installations, projects, or plants to the technical services concerned, by which they were transmitted to the appropriate zone transportation officers. The zone transportation officers then had field surveys made to verify the need, both as to quantity and type of equipment. If the recommendations of the surveying officers did not satisfy the officers making the requests, the differences were referred to the Highway Division. The zone transportation officers were directed to make periodical inspections to determine whether vehicles were being fully and properly utilized and to report their findings to the Highway Division. For security reasons the Manhattan District was excepted from the above arrangement, and all allocations and inspections were made directly by the Highway Division.

At the outset the task of bringing better order into the handling of administrative vehicles was a complicated one, because of the number of units, the variety of types, the lack of adequate central records, and the changing requirements of installations after V-E Day.[120] As soon as possible, survey teams representing the Chief of Transportation and the service commands visited the installations, investigated the utilization of the equipment on hand, and recommended changes in the numbers and types of vehicles assigned. A system of reporting and recording was established, including tabulating machines, which made available to the Highway Division on short notice complete information regarding the vehicles assigned to each installation and the locations of the vehicles of a given type. These records, together with the utilization reports received from the survey teams, made possible the allocation, reallocation, and withdrawal of vehicles in accordance with sound transportation policies based on experience. Through the surveys many vehicles which

[119] OCT Misc Ltrs 196 and 197, 13 Jun 45; TC Cir 65-5, 28 Jul 45, and C 1, 12 Aug 45.

[120] Memo, C of Hwy Div for CofT, 9 Oct 45, sub: Rpt on Accomplishments and Handicaps, p. 3; Hist Rpt, Hwy Div OCT, 1 Jul 45–15 Aug 46, pp. 2–3. Both in OCT HB Hwy Div Rpts.

previously were not included in the War Department record were brought under central control. From 92,674 vehicles in the record received by the Chief of Transportation in July 1945, the number increased to 122,367 in October when the new records were completed. Thereafter, the number of vehicles in service steadily declined.

As previous discussion has indicated, the zone transportation officer had an important role in the control of administrative vehicles, and that was especially true because he served not only as field representative of the Chief of Transportation but also as transportation officer for the service command. The zone transportation officer of the sixth zone, in a report rendered at the close of the war, pointed out that this dual role was a difficult one.[121] He served two superiors whose policies differed in some respects because one viewed the problem primarily from the standpoint of the installations under his jurisdiction while the other viewed it from the standpoint of the over-all need and what appeared to be an economical use of transportation equipment. Under these circumstances the zone transportation officer sometimes found it difficult to function with complete consistency and full efficiency. It would be reasonable to assume that the Chief of Transportation, if he had been vested with the entire responsibility, could have been relied on to provide administrative vehicles to the various installations with the same regard for requirements, priorities, and emergency situations that he displayed in providing other forms of transportation to all branches of the Army.

[121] Ltr to Exec Asst OCT, 2 Nov 45, OCT HB 6th Zone Gen.

CHAPTER XI

Observations and Conclusions

An attempt has been made in the foregoing chapters to set forth the more significant circumstances and developments in connection with the administration of Army transportation during World War II—circumstances and developments related chiefly to the organization, functions, operations, and operating relationships of the Transportation Corps. From the details presented, certain generalizations may be formulated and certain conclusions drawn, which will give emphasis to the major problems already discussed and at the same time will establish more clearly the background against which the remaining two volumes of Transportation Corps history are being prepared.

In considering the general subject of Army transportation and the work of the Transportation Corps in particular, two facts are to be borne in mind. First, the task of moving the Army's personnel and matériel was the heaviest transportation assignment that ever fell to a single organization. It was heavy because the volume of the traffic was large, the movements were scattered over the greater part of the globe, and the means of transport were barely sufficient to meet the requirements. The second fact which must not be overlooked is the lack of preparedness on the part of the Army to fulfill its wartime transportation responsibilities. There was lack of physical preparation, which was a common experience among the arms and services. There also was lack of preparation for the management of so large an undertaking, and in that respect the Transportation Corps was in a peculiarly unfavorable position because of the fact that it was not established until after the United States had entered the war.

To say that the Army had not prepared itself to handle the gigantic wartime transportation task is not to discredit the work done by the offices which were responsible for transportation before Pearl Harbor. The Transportation Branch of G–4 and The Quartermaster General's Transportation Division undertook to develop the means with which to handle the increasing traffic load, and in most respects they met the requirements adequately. The Chief of Engineers took steps to improve the organization and equipment of the Military Railway Service. Yet all through the prewar period it was recognized that the existing arrangements would be unsuitable if the United States should become a belligerent. Transportation obviously did not have the status which the experience of World War I had demonstrated it should have—that of an independent and integrated service. The staff and operating functions were in separate offices and the dividing line between their respective responsibilities was not clearly drawn. Other branches of the War Department had traffic organizations whose activities sometimes were at cross purposes with those of G–4 and The Quartermaster General. Probably the greatest weakness

was the lack of a comprehensive program of forward planning, embracing all aspects of transportation and covering all probable contingencies.

It is surprising that this situation should have existed, for it meant that the transportation lessons of World War I had been largely lost from view. They had not been forgotten by the individual officers who had observed the failures of Army transportation during the earlier hostilities, but they had ceased to be a vital force in the affairs of the Army. Although those most closely concerned with transportation in 1917–18 had strongly recommended the establishment of a permanent, independent, and thoroughly integrated transportation service, that recommendation was not followed. A widespread feeling in the nation that the responsibility of the United States in world affairs had been fulfilled with the defeat of the Central Powers, and the postwar urge for economy which dominated Congress, were largely responsible for the decision. The consequence was that as the storm clouds gathered over Europe in 1939 the transportation responsibilities of the Army were scattered and forward planning was at low ebb. As the emergency deepened and it became more and more probable that the United States would be drawn into the fray, there was no possibility that these conditions might be rectified quickly. With the limited funds and personnel available, it was a struggle to keep abreast of current requirements. Pearl Harbor, therefore, found the Army preparing but not prepared for the performance of its transportation task.

In modern, fast-moving, technological warfare thorough and imaginative forward planning constitutes a great advantage. Such planning cannot be expected when the functions of a service are scattered and subordinated to other services, as was the case with Army transportation between the wars. The inspiration for this type of preparation comes with the realization of undivided and undiluted responsibility. It must include a determination to carry on the preparatory work despite the discouragements of personnel ceilings and budgetary limitations. Army transportation clearly was lacking in these respects when World War II overtook it.

The late establishment of an integrated and independent transportation service and the lack of adequate planning contributed directly to certain weaknesses which beset the administration of Army transportation during the early part of the war, and they continued to plague the Chief of Transportation long after his office had been established. The more basic weaknesses can be summarized briefly.

The organization of a service in peacetime should provide the foundation upon which the wartime structure can be built speedily and with a minimum of disruption. This patently was not the situation with respect to Army transportation in December 1941. The developments which had taken place in the organization of The Quartermaster General's Transportation Division and the Transportation Branch of G–4 during the preceding years were along sound functional lines, but they were designed to meet current needs rather than ultimate wartime requirements. When war came, the merging of the Transportation Division and the Transportation Branch into a headquarters organization was accomplished smoothly and with few maladjustments, but the situation in the field was far less felicitous. It was a full year after Pearl Harbor before a satisfactory field organization was established in the zone of interior. Further-

more, many new types of troop organizations for service in the oversea theaters had to be developed during the war because the need of them had not been visualized earlier.

The late establishment of his office greatly increased the personnel problems which confronted the Chief of Transportation. Because of the limited peacetime transportation operations, there was a very small nucleus of Army officers with experience in that field when the expansion began in 1940. Moreover, as officers of the Quartermaster Corps and the Corps of Engineers, these men had devoted only part of their Army careers to transportation, and few could have been called specialists in that highly technical industry. While the services of many competent men from the transportation industry were acquired by the Army during the prewar emergency, both as commissioned officers and as civilian experts, these men were few in number compared with the size of the task which the Chief of Transportation ultimately was called on to perform. Most of his personnel expansion took place after the war was well under way and the competition for manpower, both in and out of the Army, had become keen. This expansion had not caught up with the need when the War Department began to impose personnel ceilings, and the burden of meeting the situation therefore fell upon the Chief of Transportation with exceptional severity.

Lack of comprehensive planning for transportation equipment, particularly that needed by the Army in the oversea theaters, also handicapped the Chief of Transportation during the early part of the war. Research and development for rail and marine equipment had been carried on in the Corps of Engineers and the Quartermaster Corps, but this work was limited by lack of funds and by the general failure to foresee the scope of the war and the many new types of equipment that would be required. In the field of motor transport, the development of proper cargo-hauling vehicles for highway services in the theaters was completely overlooked. The Chief of Transportation consequently was confronted with a Herculean task in these fields, and it was not until 1944 that he began to catch up with the requirements.

Standard procedures to insure the smooth and timely execution of troop and supply movements to the oversea theaters had to be extensively revamped during the war. The execution and control of these heavy movements required co-ordination not only between the headquarters and field offices of the Army transportation organization, but also co-ordination with other branches of the Army, with the Navy, with the several civilian agencies of the federal government which were charged with the regulation of transportation, and with the carriers themselves. Although the development of adequate procedures received a great deal of attention in the Office of the Chief of Transportation and in Army Service Forces headquarters, progress was gradual. Excellent results were achieved, but some of them did not come until late in the war.

Another untoward result of the late creation of the Transportation Corps was its lack of a well established and uniformly recognized place in the Army scheme of things. Army doctrine on this point had to be developed during the war. In consequence, the Chief of Transportation found it necessary repeatedly to take a vigorous stand to prevent functions which were assigned to his headquarters or his field establishment in the zone of interior from being

absorbed or encroached on by other elements of the Army Service Forces. In some of the oversea theaters, because at the time of their establishment there were no directives clearly defining the position and responsibility of the theater Chief of Transportation, that official did not have proper recognition and authority, and was handicapped in the performance of his mission. This situation not only affected the efficiency of transportation operations within the theaters, but it made co-ordination between the Chief of Transportation in Washington and theater commanders more difficult.

In part at least the late creation of the Transportation Corps was responsible for the fact that during the war the Chief of Transportation did not have control of some Army transportation activities. He was not recognized as the proper agency to establish the organization of troop units and the design of equipment for highway transport in the theaters until after the war. Authority to regulate Army traffic by air in the zone of interior, which was taken from him early in the war, was not restored to the Transportation Corps until after hostilities were over. The newness of the Chief of Transportation's field organization in 1942 weakened his ability to resist a demand of the Army Air Forces for delegation of authority to control its own freight traffic by surface carriers in the zone of interior—a delegation which the Chief of Transportation subsequently regretted. He did not have sufficient authority over the transportation officers at some classes of Army installations to enable him to direct their activities effectively. His control of utility railways at some installations was not as complete as he considered desirable from the standpoint of efficiency.

It is not to be assumed that if there had been a Chief of Transportation and an integrated transportation service before the war, all the difficulties which General Gross encountered with respect to organization, personnel, equipment, procedures, and doctrine would have been avoided. It is most unlikely that the extent and nature of the transportation problems and requirements would have been adequately visualized, or that, if visualized, sufficient funds could have been obtained to accomplish anything approaching thorough preparedness. It is reasonable to believe, however, that had there been a Transportation Corps in the prewar years, headed by a Chief of Transportation with vision and drive, the Army would have been much better prepared than it was to fulfill its transportation mission when war came.

Despite its late start and its lack of control over certain aspects of Army transportation, the Transportation Corps occupied a strong position in the military establishment. In its execution of troop and supply movements in the zone of interior and between the zone of interior and the theaters, it served the entire Army directly and constantly, and the successful performance of its service was recognized as an essential element in the success of the military effort. Because of this fact, and because of the heavy role which long-range transportation planning and movement co-ordination played in the achievement of strategic objectives, the Chief of Transportation performed an important staff function as well as a technical service for the Army, and therefore maintained an exceptionally close relationship with the headquarters of the Army Service Forces and with the Operations Division of the General Staff. The close contact which the commanding general of

the Army Service Forces maintained with Transportation Corps activities, and his support of the Chief of Transportation in most of his controversies with other elements of the Army Service Forces, reflected his estimate of the importance of the Transportation Corps' role.

The success of the Transportation Corps in carrying out its mission was generally recognized. There were local failures and there were delays, but the record of over-all achievement leaves no doubt that the large and complex task which fell to the corps was performed with a high average of efficiency. This was due not alone to technical proficiency but also to the strong sense of responsibility which General Gross felt and imparted to his staff, and his readiness to fight for the policies which he considered essential to the fulfillment of that responsibility. This sense of responsibility sprang from the fact that the war had to be won in the oversea theaters, and it found pointed expression in the emphasis which the Chief of Transportation placed on the maintenance of close relations between his office and the oversea commanders and on instant responsiveness by his staff to theater needs for men and matériel.

The maintenance of smooth working relations with the transportation industries and with the governmental agencies concerned with transportation was an essential part of the Army transportation task. The great bulk of the Army's traffic in the zone of interior and on the high seas moved on carriers which were under civilian management—the railways, the trucks, the buses, and the steamships. The domestic transportation lines were regulated and controlled by the Interstate Commerce Commission and the Office of Defense Transportation. The construction of new ships was a responsibility of the Maritime Commission, and the operation of all U.S. shipping, except the small amount which was under the direct control of the armed services, was controlled by the War Shipping Administration. The construction of additional railway, highway, and marine equipment was subject to the overriding control of the War Production Board. Co-operation with those industries and agencies was a day-to-day requirement in the Transportation Corps, and the success of that co-operation measured the efficiency with which troops and military supplies were moved.

Just as Pearl Harbor found the Army without adequate provision for meeting its wartime transportation requirements, so the country as a whole was without adequate machinery for the regulation of transportation in the national interest. The office of Defense Transportation and the War Shipping Administration were not set up until after the United States had entered the war. Both were confronted with tremendous tasks. Fortunately some regulation of shipping already had been undertaken by the Maritime Commission, and a measure of regulation over the inland carriers had been exercised by the Interstate Commerce Commission. From these agencies the War Shipping Administration and the Office of Defense Transportation derived considerable experienced personnel. But the new offices had far greater problems to meet than their predecessors had dealt with — problems which had to be tackled with the war already in progress. In addition to developing regulations and procedures for controlling operations, WSA and ODT had to work out methods for dealing with the transportation requirements of the armed services and for balancing them against other require-

ments in determining how the nation's transportation resources should be employed. It is worth repeating that these things had to be accomplished largely after we entered the war.

The competition of military with other requirements for shipping was keen from the beginning. There were not enough bottoms to meet all needs fully, and frequently the programs had to be curtailed. The contention of the armed services that their requirements should in all cases have first priority was largely but never completely recognized by the War Shipping Administration. To put it another way, while WSA refused to recognize the right of the armed services to dictate the amount of shipping they should get from the national pool, it gave them as much as it could after meeting requirements imposed by the President. The President's requirements related chiefly to the movement of lend-lease goods to other of the United Nations and the assignment of American vessels to the accomplishment of the British and Soviet import programs. Since these undertakings were motivated by the desire to keep our European allies effectively fighting the Axis, they were in essence military measures and they were rated as such in the thinking of the Commander in Chief.

Although the domestic carriers were hard-pressed from the early days of the war to meet the expanding requirements, and had to adopt all possible measures to increase their efficiency and to improve and conserve their resources, military traffic was not seriously affected by equipment and manpower shortages until toward the close of hostilities. Such shortages were most acutely felt in the redeployment and repatriation of troops from the time of Germany's capitulation to the end of 1945. The Office of Defense Transportation, although eventually it cut heavily into commercial services in order to provide railway cars for moving troops, did not act as promptly in that matter as the Army thought it should. The Office of Defense Transportation believed that the Army should have supported the new equipment and manpower programs more effectively than it did, but the Army was confronted with the necessity of weighing the needs of the transportation industry against the military needs for material and soldiers with which to fight the enemy, and its decisions always were made in the light of the possibility that civilian traffic could be reduced to whatever extent might become necessary in order to properly accommodate military movements.

The impression existed in some quarters, and it has been presented in an official published statement, that the Army tried to gain control of all inland transportation and shipping early in the war.[1] Justification for so broad an assertion was not disclosed by the research performed in the preparation of this volume. The Army had a tremendous transportation task to perform, and the officers responsible for performing it had to rely largely on nonmilitary means. They believed that certain transportation policies and arrangements were necessary to insure that the Army's requirements for troop and supply movements were met, and they were aggressive in trying to bring those policies and arrangements into effect. It does not follow, however, that the Army desired to control all transportation. This point deserves further examination.

As regards inland transportation, the Army jealously guarded the recognized right of military traffic to priority over other

[1] Bureau of the Budget, *The United States at War* (Washington, 1946), p. 152.

traffic, but this affected only a small part of the total transportation capacity. During the weeks immediately following Pearl Harbor, the Army insisted that a general system of traffic control should be established to prevent the development of freight car congestion at the seaboard such as had seriously handicapped the military effort in 1917. Since the Army already had machinery in operation for controlling its own traffic and since no other agency was so prepared, the Army was willing to take over the regulation of all portbound freight movements. The military authorities nevertheless went along with a proposal to set up a Transportation Control Committee to act under authority delegated by the Office of Defense Transportation, and it gave that committee its full support. Acting under a Presidential order, the Army took control of the railways for a few weeks during the winter of 1943–44, while there was danger of the carriers being tied up by strikes, but it refrained from interfering with the functions of the railway managements, the Office of Defense Transportation, or the Interstate Commerce Commission during this period, and when the strike threat was passed the Army relinquished its control instantly. Nothing has been found in the record to indicate that the Army coveted complete control of the inland carriers.

With respect to ocean transportation, the Army pressed its contention that the armed forces should have first claim on the available shipping to the extent that it was needed for the execution of approved strategic programs. The Army maintained that, from the standpoint of efficient control and security, the bulk of its supplies for the theaters should be loaded at Army ports of embarkation rather than at commercial piers, notwithstanding the fact that most of the vessels were operated by War Shipping Administration agents. Late in 1942, in an effort to achieve greater co-ordination and economy in their logistical operations, the Army and the Navy considered a comprehensive plan which included the establishment of a joint transportation service and the placing of all vessels used by the armed services under naval operation. The proposal for a joint ocean transportation service was not new, but was rather a revival of a feature of the joint war plan which had been agreed on before the United States entered the conflict. This proposal, along with some other features of the plan, never got beyond the stage of preliminary consideration. Even if it had been agreed on by the Army and the Navy, and they had been able to get the President to approve it, only the operation of vessels which were in military service would have been affected. Here again, the record has not disclosed any desire or attempt on the part of the Army to get over-all control of American shipping.

The efforts toward greater co-ordination between the Army and the Navy in regard to transportation brought a mixture of successes and failures. The proposal for a completely unified transportation service failed, basically because of the differing logistic systems which the two services had developed and the unwillingness of each to surrender control to the other. The Army and the Navy also disagreed on the method of controlling shipping assigned to the Pacific theaters. Against these conspicuous failures there were some noteworthy achievements in the way of greater co-ordination—joint planning for the procurement and employment of ships, joint use of ship space, joint control of port operations and ship repairs, co-ordination of oversea supply op-

erations, and the adoption of joint shipping procedures. All of these improvements came after the United States had entered the war and were achieved against a background of almost complete independence in the prewar transportation activities of the two services.

The wartime experience convinced Generals Somervell and Gross that a joint Army-Navy transportation service was desirable. Such a service, they believed, would insure greater operating economy by eliminating duplicating activities, personnel, and facilities.[2] They also believed that a joint transportation service would prove more efficient from an operating standpoint. While recognizing that the Joint Chiefs of Staff and the Joint Military Transportation Committee were effective instruments for joint planning and over-all control, they did not consider a board or committee well suited for the day-to-day handling of operating matters. Such matters, they pointed out, require prompt and technically correct decisions. Committee actions, which often involve discussions and sometimes end in compromises, do not meet that requirement.[3]

The discussion of shipping matters by the Combined Chiefs of Staff and the Combined Military Transportation Committee, where the entire range of Allied requirements for ocean transport were considered, disclosed a greater unity between the military and civilian points of view on the British side than on the American. The basic reason probably was that British military success and British national survival were more dependent on oversea trade, particularly the import program, than was the case with the United States. Britain had passed through and had been disciplined by severe national crises during two world wars in which the greatest danger was that she would be unable to offset the enemy's attack on her shipping and to maintain an adequate flow of essential imports. In both wars British shipping was administered by a cabinet member, and in World War II the Ministry of War Transport controlled not only all aspects of shipping but inland transportation as well. In the absence of such a disciplined attitude toward shipping and such a centralized control over all the means of transport, the United States had to endeavor to achieve comparable results by co-operation among agencies—co-operation between the Army and the Navy, and co-operation between the armed forces and the several civilian offices concerned.

Wartime transportation was a co-operative endeavor on both the international and the American levels. There were differences between the British and American points of view regarding some of the shipping problems, but practical adjustments were worked out and a remarkable degree of teamwork was achieved. There were disputes between the U.S. armed forces and the civilian transportation authorities, but these disputes were overshadowed by the broad collaboration which was practiced. The Army and the Navy failed to achieve a joint transportation service and so lost some of the economy and efficiency which such

[2] Concerning duplications, see Contl Div ASF, Report to the Secretary of War on Common Activities of the Army and Navy, 12 Dec 45, pp. 58–72, AGO Hist Rec Sec, A 49–212 RG 114.

[3] Statement, Gen Somervell before Select Committee on Postwar Military Policy, HR, 78th Cong., 2d Sess., Hearings pursuant to H. Res. 465, *Proposal to Establish a Single Department of Armed Forces*, Part 1, pp. 100–102; Memo, CofT for Gen Scott, 19 Oct 45, and attached statement favoring a joint transportation service, OCT HB Wylie Staybacks.

a service would have effected, but they developed close co-ordination in many phases of their logistics. In the stress of war, the Army Chief of Transportation sometimes felt keen disappointment because of what he considered shortcomings in the co-operative effort. Yet looking backward after the hostilities were over, it must have been the accomplishments rather than the failures which seemed significant. Their greatest significance, of course, lay in the promise which they gave of even fuller co-ordination in the future—co-ordination planned and perfected in peacetime.

Appendix A*

Principal Functions of the Supervisory Officers and the Divisions of the Office of the Chief of Transportation, as of 1 July 1945

Executive Officer

Act on executive matters which in his judgment do not require the personal attention of the Chief of Transportation; act on or arrange for action on matters which require co-ordination between two or more divisions and which do not come under the jurisdiction of a single director; relieve the Chief of Transportation of administrative burdens insofar as possible; supervise the activities of the Technical Information Unit, the Demobilization Planning Unit, and the Historical Unit.

Director of Operations

Co-ordinate the operating activities of the Office of the Chief of Transportation, the ports of embarkation, and the other TC field agencies; maintain liaison with the Operations Division of the General Staff and the Army Service Forces headquarters regarding the movement of troops and matériel; prepare estimates of the future availability of transportation resources and the capabilities of the ports to handle Army traffic; ascertain current and future Army requirements for transportation and take measures to insure that they will be met; keep the appropriate TC agencies informed regarding priorities of movement; arrange with the War Shipping Administration and the Navy for the joint use of transportation facilities; supervise the activities of the Army delegate to the interdepartmental Transportation Control Committee; supervise the work of the Planning, Movements, International, and Port and Field Agencies Divisions.

* This summary is based on Transportation Corps Pamphlet No. 1, Organizational Manual, and complements Chart 2 of this volume. Its purpose is to give a general indication of the distribution of functions in the Office of the Chief of Transportation rather than a complete analysis of functions and relationships. Except as otherwise stated, the functions described relate to the zone of interior.

Director of Water Transportation

Supervise all TC water transportation activities; co-ordinate the activities of the Water Division of the Office of the Chief of Transportation and the ports of embarkation; represent the War Department in negotiations with the War Shipping Administration and the Navy regarding the allocation and utilization of vessels; represent the War Department in negotiations with the Maritime Commission regarding types and designs of vessels to be constructed for Army use; represent the War Department in technical matters relating to the conversion of merchant vessels to meet requirements of the Joint and Combined Chiefs of Staff; deal with such other technical marine matters as may be assigned to him by the Chief of Transportation.

Director of Matériel and Supply

Co-ordinate and exercise technical supervision over the design and development of TC equipment; supervise the compilation of requirements for TC equipment and supplies, including those for international aid; control the procurement and production of all TC matériel; supervise the operation of TC depots; establish standards and issue instructions for the maintenance of TC equipment; direct the redistribution, salvage, and disposal of TC matériel; maintain liaison with ASF headquarters on supply matters; direct the work of the Research and Development Division, Requirements and Distribution Division, Procurement Division, Maintenance Division, and Property Disposal Division.

Director of Military Training

Supervise the military training of all TC units and individuals, and the training of units of other technical services attached to TC installations for training or functional duties; establish policies, doctrines, and standards for training TC troops; establish tables of organization and equipment and tables of allowances for TC troop units; estimate requirements for TC troops and establish training programs to meet those requirements; designate TC troop units to fill theater requisitions; supervise inspections to determine the progress of units in training; maintain liaison with the Director of Military Training, ASF headquarters; supervise the work of the Military Training Division.

Director of Personnel

Formulate policies for the employment and utilization of TC military and civilian personnel; control personnel authorizations and strength reports for TC installations; supervise the utilization of TC personnel; supervise the execution of morale programs in the Transportation Corps; supervise the activities of the TC Employees' Suggestion Committee; represent the Chief of Transportation in efforts to maintain an adequate supply of labor in the industries concerned with the operation of ships and the production of TC equipment and supplies; maintain liaison with the Director of Personnel, ASF headquarters; direct the work of the Military Personnel and the Industrial Personnel Divisions.

Control Division

Assist the Chief of Transportation in controlling and improving the organization and administration of the Transportation Corps; develop statistical data as a basis for judging the efficiency of TC operations and the effectiveness of TC procedures;

recommend adjustments in policies, organization, procedures, and methods where such adjustments seem requisite; advise and assist control officers at TC field installations; maintain liaison with the Control Division, ASF headquarters.

Planning Division

Assist the Chief of Transportation and the Director of Operations in all phases of transportation planning; prepare long-range estimates of transportation requirements and the availability of transportation resources; study the implications and estimate the practicability of proposed war plans from the standpoint of transportation capabilities; estimate the transportation requirements for the supply of civilian populations in liberated areas; co-ordinate planning by the operating divisions in the Office of the Chief of Transportation with regard to oversea requirements for TC personnel and matériel; co-ordinate the planning of the several OCT divisions for the redeployment of U.S. troops and matériel.

Port and Field Agencies Division

Act in a staff capacity in regard to housekeeping activities at TC field installations, the acquisition and release of real property and facilities, and food service; review and recommend disposition of proposals for the activation or inactivation of field installations and facilities; supervise the activities of the oversea supply divisions at ports of embarkation; supervise stock control and supply operations at ports of embarkation; supervise the handling of baggage returned from overseas; supervise the handling of mail passing through ports of embarkation.

Movements Division

Maintain liaison with other branches of the War Department and with agencies of United States and foreign governments regarding personnel movements; supervise the movement of troops to port staging areas and their processing at the staging areas; schedule Army-controlled troopships on the various routes in accordance with theater requirements and War Department priorities; negotiate with the War Shipping Administration and the Navy regarding Army use of troopships under the control of those agencies; maintain liaison with the Navy Department regarding troopship convoys and unescorted sailings; schedule the movement of hospital ships and co-ordinate the disposition of returning patients with the Office of the Surgeon General; supervise the activities of permanent military staffs on transports.

International Division

Co-ordinate the activities of the Transportation Corps in regard to lend-lease (except procurement), and the supply of the civilian populations of liberated areas; maintain liaison with the International Division, ASF headquarters, the international divisions of other technical services, and the appropriate officers of other American and foreign government agencies in regard to international aid; represent the Chief of Transportation in matters pertaining to customs regulations and procedures affecting the War Department; co-ordinate arrangements relating to the furnishing of supplies and services by foreign governments to the Transportation Corps under reverse lend-lease.

Intelligence and Security Division

Represent the Chief of Transportation in liaison with the Military Intelligence Division, WDGS, the Provost Marshal General, the Director of Intelligence, ASF, and other governmental agencies concerned with intelligence and security matters; collect and disseminate technical information of value to the Transportation Corps; supervise TC counterintelligence activities including the investigation of espionage, subversion, and disloyalty; supervise all TC internal security activities and the enforcement of measures for the protection of vessels; establish standards and supervise the activities of TC field installations in regard to safety of employees; establish the loyalty of military and civilian personnel assigned to the Chief of Transportation; supervise TC activities relating to the safeguarding of military information.

Legal Division

Advise and act for the Chief of Transportation in legal and legislative matters; counsel TC contracting officers regarding the legal aspects of procurement and contracting; review TC contracts and bonds with reference to their legality and compliance with approved policies, and assist in the negotiation, amendment, and termination of such agreements when necessary; review and recommend disposition of claims for or against the government, arising from TC contracts or TC activities; act on behalf of the Secretary of War in regard to claims under builders' risk insurance policies on vessels being constructed for the War Department; review proposed legislation affecting TC activities and recommend changes which seem advisable; handle all patent matters affecting the Transportation Corps.

Fiscal Division

Prepare budget estimates for TC requirements and justification for such estimates; allot available funds to the various TC activities and maintain accounts showing the current status of such funds; adapt TC fiscal policies and procedures to the policies and procedures established by the War Department and the Army Service Forces; supervise the fiscal activities of TC field installations and conduct special audits at such installations when necessary; analyze TC contracts, and subcontracts thereunder, with respect to costs and profits; act for the Chief of Transportation in connection with the renegotiation of contracts; maintain property accountability records.

Administrative Division

Establish simplified methods of administrative procedure for the Office of the Chief of Transportation and TC field installations; control and authenticate OCT correspondence; process communications for the signature of the Chief of Transportation and higher authority; receive and distribute incoming communications; maintain record files; control the purchase and distribution of office supplies; control office arrangements such as allocations of space, telephones, and dictaphones; supervise printing, binding, and reproduction work; edit, publish, and distribute TC orders, circulars, and similar directives.

Military Training Division

Formulate doctrine for the organization and training of TC units and replacements; formulate tables of organization and equipment and tables of allowances for TC units; prepare mobilization and advance training

programs; prepare publications relating to TC troop organizations and training; arrange for the technical training of TC officers and enlisted men at industrial plants; inspect training installations to establish that TC training plans and policies are being followed and to determine the status of TC units in training; maintain contact with training installations where deficiencies in training have been found to insure that such deficiencies are corrected; review reports and films from oversea theaters and reports from officers returning from overseas to obtain information for use in revising TC troop organizations, training methods, and publications.

Military Personnel Division

Develop policies, plans, and procedures for the administration of TC military personnel in accordance with War Department regulations; appoint, assign, promote, transfer, and separate TC military personnel, and maintain the records necessary for these purposes; review and process through the Office of the the Chief of Transportation requests for military personnel from installations in the zone of interior and from oversea commands; review duty assignments of TC military personnel in the zone of interior and recommend reassignments when necessary to assure full utilization of individual skills; co-ordinate matters relating to the promotion and transfer of military personnel to assure uniform practices.

Industrial Personnel Division

Develop policies, plans, and procedures relating to the administration of TC civilian personnel; provide civilian personnel for the Office of the Chief of Transportation; maintain recruiting services for ship and shore personnel on behalf of TC field installations, when necessary; develop and conduct training and morale programs to improve the efficiency of TC civilian employees; process grievances filed by OCT employees; make preliminary surveys for the classification of positions under the regulations of the Civil Service Commission; supervise the placement and promotion of civilian personnel to assure uniform standards; collaborate with the Water Division in the formulation and publication of marine personnel regulations for civilian seamen on Army-operated vessels; propose policies and co-ordinate TC activities in regard to labor supply and labor relations at industrial plants executing TC contracts and in the transportation industry; represent the War Department on the Shipbuilding Stabilization Committee of the War Production Board, and maintain liaison with the Shipbuilding Commission of the War Labor Board, to assure proper consideration for TC interests.

Research and Development Division

Exercise technical supervision over the design, development, and testing of TC equipment, and experimental work in connection therewith; obtain clearance for all changes in designs and specifications for TC equipment affecting military characteristics; maintain liaison with other governmental agencies on technical matters affecting TC matériel; serve as point of contact for the Chief of Transportation with the Transportation Corps Board on matters relating to TC matériel; study foreign data and foreign transportation equipment with a view to improving the quality and suitability of TC matériel.

Maintenance Division

Co-ordinate communications and reports pertaining to maintenance policies, procedures, and problems affecting railway equipment, vessels, Army railroad repair shops, marine repair shops, and combined maintenance shops; co-ordinate TC activities relating to the repair, reclamation, and reconditioning of equipment and supplies to be placed in depot stock; co-ordinate the preparation of TC manuals, bulletins, and other publications relating to the repair, reconditioning, reclamation, and maintenance of TC equipment and supplies; bring TC maintenance policies and practices into accord with ASF policies and practices.

Procurement Division

Serve as control agency for construction, production, and purchasing in connection with all TC equipment, spare parts, and supplies; prepare engineering plans, specifications, bills of materials, and cost estimates for all items to be procured; call for bids and award contracts for all major items of TC matériel; allocate to TC procurement offices the procurement responsibility for specific classes of supply items; establish requirements for and allocate controlled materials; direct production scheduling and establish and maintain master production schedules; exercise staff supervision over the inspection activities of TC field procurement offices; take necessary actions in connection with the readjustment and termination of contracts, and exercise staff supervision over the activities of TC field procurement offices relating to such matters.

Requirements and Distribution Division

Supervise the compilation of requirements for TC equipment, spare parts, and supplies, including the requirements of other governmental agencies and the requirements for international aid; supervise activities directly related to the receipt, processing, storage, issue, packing, marking, and shipment of TC matériel, except floating equipment in wet storage; serve as central supply control agency for all principal items, and as the initial source of supply for all restricted items of dry storage equipment; supervise TC depot operations and maintain necessary supply records and controls; prepare specifications for article descriptions and maintain a dictionary of article names for all items of TC supply; determine the need for and prepare manuscripts for TC supply catalogs and related publications.

Property Disposal Division

Maintain records of property declared excess to TC and property reported to disposal agencies as surplus to the War Department; supervise activities at TC installations in connection with the redistribution and disposal of property declared excess or surplus; co-ordinate TC action on property resulting from the termination of contracts, so as to obtain prompt clearance from contractors' plants; co-ordinate action on reports of theater commanders relating to excess TC matériel; supervise salvage activities at TC installations.

Water Division

Establish operating and maintenance policies and standards for and supervise the operation, maintenance, and alteration of ocean-going vessels owned by or under bareboat charter to the Army; assign harbor boats and other small floating equipment owned by or chartered to the Army, and

supervise the operation and maintenance of such equipment to the extent authorized by Army regulations; supervise terminal and stevedoring operations at ports of embarkation, and contracting for such services, and maintain cost and efficiency records; exercise administrative control of TC marine repair shops and wet storage basins; co-ordinate with the Maritime Commission and the War Shipping Administration regarding plans for the conversion of vessels under the jurisdiction of those agencies for use by the Army; obtain ships and ship space from the War Shipping Administration to lift Army cargo; maintain liaison with the War Shipping Administration and the Naval Transportation Service with regard to the exchange of cargo; co-operate with the Traffic Control Division in regulating the flow of cargo to ports of embarkation; study the facilities and labor supply at U.S. and oversea ports to be used by the Army, and determine their capacities to handle shipping; analyze the operation of vessels in Army service to determine the efficiency with which ship time and space are used; supervise investigations and actions in connection with marine casualties and salvage operations in which the War Department has an interest.

Traffic Control Division

Provide routing for all passenger movements involving groups of forty persons or more, and for carload freight, by rail, highway, or water; deal with all matters relating to passenger and freight rates on behalf of the War Department; negotiate with the carriers regarding freight classification ratings and descriptions, transit arrangements, demurrage, weight agreements, loading rules, switching and other accessorial charges; arrange for special trains for the movement of troops and impedimenta and control such movements en route; control the flow of War Department and lend-lease freight destined to the ports by issuing permits for each shipment; arrange for and control expedited movements of freight; direct the operation, maintenance, and distribution of War Department tank cars; technically supervise the operation of consolidating stations and distributing agencies, and all arrangements in connection with the consolidated freight service; prepare instructions for transportation officers at Army installations regarding traffic matters; analyze proposed sites for Army installations with reference to traffic factors and arrange for adequate transportation services for such installations; study Army traffic with a view to eliminating wasteful practices and improving the utilization of equipment; study the effect of proposed abandonments of common carrier services on Army traffic.

Rail Division

Establish policies and procedures in regard to the Military Railway Service; co-ordinate with the director of military training in establishing training doctrine, tables of organization and equipment, and tables of allowances for units of the MRS, and in the preparation of manuals relating to MRS; co-ordinate with the director of supply and matériel in establishing the design of rail equipment to be procured for Army use in the zone of interior and in oversea theaters; act as rear echelon for Military Railway Services in the theaters in regard to personnel, equipment, and supplies; supervise the operation and maintenance of Army hospital cars as railway

equipment; assign utility railroad equipment to Army installations in the zone of interior, and exercise technical supervision over the operation and maintenance of such equipment; advise railway officers in the zone transportation offices on technical railway matters; evaluate from an operating standpoint the plans for additional railroad facilities at Army installations; study the line haul and terminal capacities of railroads in relation to prospective movements of Army traffic; assemble information regarding the facilities of and operating conditions on foreign rail lines, for use in preparing logistical plans for the U.S. Army.

Highway Division

Consider requests for Army buses to serve Army installations and war industries, approve contracts for the operation of such buses, and supervise the administration of such contracts; assist commercial motor carriers to obtain needed equipment, spare parts, and personnel, and to obtain additional operating authority to enable them to properly serve the Army; study highway operations in the zone of interior to ascertain whether equipment and manpower are being used economically, and develop plans for improvements; review proposed highway construction projects to determine whether they are essential to the war effort; study highway facilities and traffic in foreign areas for purposes of strategic planning; recommend types and quantities of vehicles for military highway services in oversea areas; advise highway officers in the zone transportation offices on technical highway matters; administer the responsibilities of the Chief of Transportation with regard to the assignment of administrative vehicles to ASF installations, and their operation; maintain liaison on behalf of the Chief of Transportation with highway traffic advisory committees, trade associations in the highway transportation field, and governmental agencies concerned with highway transportation.

Transit Storage Division

Establish policies for warehousing and storage at TC installations, except depots; supervise the allotment of space and the storage methods used at holding and reconsignment points; maintain general records of materials stored at holding and reconsignment points; arrange with the technical services for the removal of supplies which have remained at holding and reconsignment points beyond the permissible time; supervise the allotment of space at railroad open storage yards and arrange for inspections to determine that Army matériel is being properly stored and safeguarded in accordance with contracts between the Army and the railroads; control the utilization of storage and warehouse space at ports of embarkation, and evaluate requests from the ports for additional space; assign materials-handling equipment to TC installations, and supervise the utilization of such equipment.

Appendix B

Wartime Commanders of the Ports of Embarkation in the Zone of Interior

Ports	*Commanders*	*Rank*	*Assumed Command*
Boston	Carlin C. Stokely	Col	Jan 1942
	Clarence H. Kells	Col–Brig Gen	Oct 1942
	Calvin DeWitt, Jr.	Brig Gen	Jun 1944
	James C. Marshall	Brig Gen	Jul 1945
New York	Homer M. Groninger	Brig Gen–Maj Gen	Oct 1940
	Clarence H. Kells	Maj Gen	Jul 1945
Hampton Roads	John R. Kilpatrick	Col–Brig Gen	Jun 1942
Charleston	James E. Slack	Lt Col	Jul 1941
	James T. Duke	Col–Brig Gen	May 1942
New Orleans	George B. Hunter	Col–Brig Gen	Jul 1941
	Fremont B. Hodson	Col–Brig Gen	Sep 1943
Los Angeles	William A. Aird *	Col	Jan 1942
	Abbott Boone	Col	Apr 1943
	James K. Herbert	Col–Brig Gen	Nov 1943
San Francisco	Frederick Gilbreath	Col–Maj Gen	Nov 1941
	Clarence H. Kells	Brig Gen–Maj Gen	Jun 1944
	Homer M. Groninger	Maj Gen	Jun 1945
Seattle	Rufus F. Maddux *	Col	Aug 1941
	Eley P. Denson	Col–Brig Gen	Dec 1941

* Installation was a subport throughout this officer's incumbency.
Source: Reports from the ports of embarkation, in the records of the Historical Branch, Office of the Chief of Transportation.

Appendix C

Transportation Zone Territories and Zone Transportation Officers

Zone Number	*Headquarters and Territory*	*Zone Transportation Officers*	*Assumed Office*
I	Hq–Boston, Mass.	Col Marcel Garsaud	Dec 1942
	Ter–Maine, New Hampshire,	Col Harry G. Williams	Jun 1943
	Vermont, Massachusetts,	Col Henry D. Bagnall	Sep 1943
	Rhode Island, Connecticut	Col Richard F. Anderson	Mar 1944
II	Hq–New York, N. Y.	Col E. B. Gray	Dec 1942
	Ter–New Jersey,	Col E. C. R. Lasher	Dec 1944
	Delaware, New York		
III	Hq–Baltimore, Md.	Col M. A. McFadden	Dec 1942
	Ter–Pennsylvania,	Col R. H. Sartor	Aug 1944
	Maryland, Virginia	Col Marsden V. Bates	May 1945
IV	Hq–Atlanta, Ga.	Col Henry L. Green	Dec 1942
	Ter–North Carolina,	Col Calvin L. Whittle	Sep 1943
	South Carolina, Georgia,	Lt Col Osborn Palmer (Actg)	Jun 1944
	Florida, Alabama, Tennessee,	Col Harry G. Williams	Aug 1944
	Mississippi		
V	Hq–Columbus, Ohio	Col H. A. Boone	Dec 1942
	Ter–Ohio, West Virginia,	Col Lincoln Martin	Jun 1944
	Indiana, Kentucky		
VI	Hq–Chicago, Ill.	Col Dan A. Hardt	Dec 1942
	Ter–Illinois, Michigan,	Col I. Sewell Morris	May 1945
	Wisconsin		
VII	Hq–Omaha, Nebr.	Col Edward A. McTamaney	Dec 1942
	Ter–Missouri, Kansas,	Col Harry G. Williams	Oct 1943
	Iowa, Nebraska, Minnesota,	Col Charles F. Perry	Aug 1944
	North Dakota, South Dakota,		
	Wyoming, Colorado		
VIII	Hq–Dallas, Tex.	Col William H. Noble	Dec 1942
	Ter–Texas, Oklahoma,	Col Raymond C. Stone	Jun 1943
	New Mexico, Arkansas,		
	Louisiana		
IX	Hq–Salt Lake City, Utah	Col John C. P. Hanley	Dec 1942
	Ter–Washington, Oregon,	Col Wallace H. Hastings	May 1944
	Idaho, Montana, Utah,	Col Stewart F. Miller	Aug 1945
	Nevada, California, Arizona		

Source: SOS Cir 91, 1 Dec 42, sub: Reorganization of TC Field Agencies; reports from the zones, in the records of the Historical Branch, Office of the Chief of Transportation.

Appendix D*

Installations Subordinate to the Zone Transportation Offices in August 1945

Branch Zone Offices: Asheville, N. C.; Cleveland, Ohio; Louisville, Ky.; Detroit, Mich.; Hot Springs, Ark.; Little Rock, Ark.; Fort Worth, Tex.; Oklahoma City, Okla.; Shreveport, La.

District Transportation Offices: Cincinnati, Ohio; Denver, Colo.; Edmonton, Alberta; El Paso, Tex.; Houston, Tex.; Jacksonville, Fla.; Kansas City, Mo.; Los Angeles, Calif.; Memphis, Tenn.; Miami, Fla.; Minneapolis, Minn.; Mobile, Ala.; New Orleans, La.; Norfolk, Va.; Philadelphia, Pa.; Pittsburgh, Pa.; Portland, Oreg.; Portland, Me.; San Antonio, Tex.; San Francisco, Calif.; Savannah, Ga.; Seattle, Wash.; Spokane, Wash.; St. Louis, Mo.

Branch District Offices: Charleston, S. C.; Colorado Springs, Colo.; Laredo, Tex.; Tampa, Fla.; Wilmington, N. C.

Holding and Reconsignment Points: Auburn, Wash.; Elmira, N. Y.; Lathrop, Calif.; Marietta, Pa.; Montgomery, Ala.; Pasco, Wash.; Richmond, Va.; Shreveport, La.; Voorheesville, N. Y.; Yermo, Calif.

Freight Consolidating Stations: Chicago, Ill.; New York, N. Y.; Philadelphia, Pa.; San Antonio, Tex.; St. Louis, Mo.; Cleveland, Ohio.

Freight Distributing Agencies: Atlanta, Ga.; El Paso, Tex.; Los Angeles, Calif.; Oakland, Calif.; Portland, Oreg.; San Francisco, Calif.; Seattle, Wash.; Spokane, Wash.; Tacoma, Wash.

Railroad Repair Shops: Bucyrus, Ohio; Fort Benning, Ga.; Holabird Signal Depot, Md.; Ogden Arsenal, Utah.

Source: WD Coml Traf Bul 42, 20 Aug 45, OCT HB TZ Gen; WD Coml Traf Bull 44, Sec. IV, 10 Sep 45, OCT HB TZ Gen Port Agencies.

* Zone Transportation Offices and territories are shown in App. C. Army Reservation Bureaus are not included above because they were attached to other TC installations. Railroad open storage yards are not included because they were not operated by TC but by the railroads under contract with TC.

Bibliographical Note

The principal sources of information in the preparation of this volume were the correspondence and reports found in the records of The Adjutant General, the Army Service Forces, the Office of the Chief of Transportation, and other elements of the Army; the directives issued by the War Department, the Army Service Forces, and the Transportation Corps; and the minutes and papers of the Joint Chiefs of Staff and the Combined Chiefs of Staff. Files of The Quartermaster General which dealt with transportation were transferred to the Chief of Transportation when the transportation function was transferred in March 1942. The locations of the various record groups are given in the Guide to Footnotes.

Frequent reference is made in the footnotes to the records of the Historical Branch of the Office of the Chief of Transportation (OCT HB), and since these records are unusual in composition and organization a word of explanation is desirable. They were begun informally in 1942 as a means of facilitating the eventual preparation of a history of the Transportation Corps. The principal constitutents are as follows:

1. Copies of significant letters, memoranda, and reports obtained during and since the war. These documents have been of special value in initiating research into particular topics.

2. Periodical reports of the divisions of the Office of the Chief of Transportation, the field installations of the Transportation Corps in the zone of interior, and transportation officers with the forces overseas. Some of these reports reflect significant activities and problems, while others are purely routine.

3. Records assembled for the personal use of the Chief of Transportation, the Director of Operations, the Executive, the Chiefs of the Planning, Movements, and International Divisions, and other officers of the Transportation Corps, which were turned over, wholly or in part, to the Historical Branch after the war. These records embrace (a) topical files relating to matters with which the individual officers were directly concerned, and (b) day files (staybacks) consisting of copies of correspondence originated in the respective offices, arranged chronologically. Such records, especially those of the Chief of Transportation, the Director of Operations, and the Executive, have been found exceedingly helpful, since they contain many documents not found in other records.

Since the Historical Branch records are composite, containing files derived from several sources, their organization leaves something to be desired. They consist of a number of series of files, topically organized as follows:

- Transportation Corps General
- Office of the Chief of Transportation (by divisions)
- Ports of Embarkation
- Transportation Zones
- Oversea Theaters
- G–4, Transportation Branch
- OQMG, Transportation Division
- Topical files (miscellaneous subjects)
- General Gross's files (including his Day File)

General Wylie's files (including the staybacks of his office)
Executive's files (including his staybacks)
Planning Division files
Movements Division files (mostly staybacks)
International Division files (mostly staybacks)
Transportation Control Committee files
Demobilization Planning Unit files
Traffic Control Division Historian's working file
Water Division Historian's working file
Army Service Forces Monthly Progress Report, Sec. 3
Historical Branch Monographs
Photographs

All but two of the monographs referred to above were prepared by members of the Historical Branch, Office of the Chief of Transportation, during the years 1943–46, as part of the wartime historical program of the Army Service Forces. They are in the nature of interim reports based on information then available. In many respects the sources of information were inadequate at the time the monographs were written, but in other respects they present useful historical data. Although not all of the thirty wartime monographs are cited in this volume, they all bear on the subjects discussed and accordingly the full list is given below:

1. The Transportation Advisory Group in the Office of the Quartermaster General, 1941–1942.
2. Organization and Activities of the Traffic Control Branch, Office of the Quartermaster General, 1941–1942.
3. Supervision of Transportation by the Supply Division of the War Department General Staff, 1940–1942.
4. Administration of Transportation in the United States Army, April 1917–March 1942.
5. Water Transportation for the United States Army, 1939–1942.
6. The Commercial Traffic Branch in the Office of the Quartermaster General, July 1940–March 1942.
7. Army Hospital Ships in World War II.
8. Expansion of Army Transportation Facilities in the Zone of the Interior, 1941–1944.
9. U.S. Army Transportation and the Conquest of North Africa, 1942–1943.
10. Operating Relationships of the Office of the Chief of Transportation with Civilian Government Agencies.
11. Transportation and the Greenland Bases, 1941–1944.
12. Troop Transports in World War II.
13. U.S. Army Transportation and the Conquest of Sicily, 1943.
14. Transportation of the U.S. Forces in the Occupation of Iceland, 1941–1944.
15. The Army-Navy Consolidated Car Service, 1942–1945.
16. Army Transportation Zones in the Second World War.
17. U.S. Army Transportation and the Italian Campaign.
18. The Army's Cargo Fleet in World War II.
19. Handling Army Cargo in the Second World War.

20. Inland Transportation of Individuals for the Army During World War II.
21. Negotiation of Rates and Services for Inland Army Passenger Travel During World War II.
22. Inland Movement of Troops in Organized Parties During World War II.
23. Control of Port-bound Freight During World War II.
24. Inland Freight Routing Practices of the Army in World War II.
25. U.S. Army Transportation in the Persian Corridor, 1941–1945.
26. The Military Training Program of the Transportation Corps in World War II.
27. Role of the Transportation Corps in Oversea Supply.
28. Supply Program and Operations of the Transportation Corps in World War II.
29. U.S. Army Transportation in the European Theater of Operations, 1942–1945.
30. The Army's Overseas Passenger Traffic in World War II.

Two unnumbered monographs, entitled U.S. Army Transportation in the Southwest Pacific Area, 1941–1947, and History of Transportation Service in China, Burma, and India in World War II, were written in 1949 and 1950, respectively. The authors had access to much more complete records than did the authors of the wartime monographs.

Secondary sources—books, magazine and newspaper articles, and published reports—have been cited chiefly to document statements on the general aspects of transportation, and on activities other than those of the Transportation Corps, which did not seem to require more extensive research. A notable exception is the Gross final report, which has been repeatedly referred to in connection with Army transportation. This report was prepared in November 1945, at the end of General Gross's tour of duty as Chief of Transportation. It was carefully reviewed by him before publication and may be taken as a responsible expression of his views on many of the problems which confronted his office.

Guide to Footnotes

Since so much of the source material for this volume consists of communications of various types filed in various records, an explanation of how the footnotes have been formulated and where the documents may be consulted is necessary. In citing communications the general plan has been to indicate the form of the communication, the sender, the addressee, the date, and the subject. Certain definitions and qualifications are to be noted.

The communications most frequently cited are of the following forms: the letter (Ltr), which was used chiefly though not exclusively for correspondence between the War Department and other departments and agencies; the memorandum (Memo), which was used chiefly for correspondence within the War Department, and sometimes for correspondence with other governmental agencies, notably the Navy; the indorsement (Ind), used extensively within the War Department as a substitute for separate memoranda; the disposition form (DF), primarily a transmittal form, but also used for comments and instructions; the report (Rpt), which reviewed a specific subject or the developments during a given period; the radiogram (Rad); the telegram (Telg); and the teletype message (TWX). When it is not clear by what means an electrically transmitted message was sent, it is cited simply as a message (Msg).

When the text indicates the sender or the addressee of a communication, this information is omitted from the footnote. The same plan has been followed when the text gives the date of the document.

The subjects given on communications have been included in the footnotes in many instances, but they have been omitted frequently in the interest of brevity. This has seemed feasible when the text indicates the general subject matter of the document cited, and the omission of the exact subject should not impair the ability to locate it. The subjects given on communications frequently are long, and they have been abbreviated in the footnotes when practicable.

The symbols on communications, indicating the office of origin and the contemplated file number, have been given in a few instances in parentheses, but more frequently they have been omitted. Omission was decided on because so frequently, particularly with communications originating in the Office of the Chief of Transportation, the symbol did not correspond to the number of the file in which the document was found.

Each citation identifies the agency in whose records the cited document is located, and gives the numerical or subject designation of the file, or both. This information is the last item in each citation. When a single location applies to several cited documents, it is clearly indicated after the last citation to which it applies. The principal records given as the locations of files are as follows:

OCT—Records of the Office of the Chief of Transportation, at present in custody of the Departmental Records Branch, AGO.

OCT HB—Records of the Historical Branch (at one time called Historical Unit) of the Office of the Chief of Transportation,

at present in custody of the Office of the Chief of Military History, U.S. Army.

AG—Records of The Adjutant General's Office, in custody of the Departmental Records Branch, AGO.

ASF—Records of Army Service Forces headquarters, now in custody of the Departmental Records Branch, AGO.

G–4—Records of the Supply Division (G–4) of the General Staff, now in custody of the Departmental Records Branch, AGO.

Trans Br G–4—Records of the Transportation Branch of G–4, prior to March 1942, now in custody of the Office of the Chief of Transportation.

P&O—Records of the War Plans Division of the General Staff, and its successors, the Operations Division and the Plans and Operations Division, now in custody of the Departmental Records Branch, AGO.

Occasional references will be found in the footnotes to other records: OSW, Office of the Secretary of War; USW, Under Secretary of War; WDCSA, Chief of Staff; OCS, Office of the Chief of Staff; WDGAP, Personnel Division of the General Staff; WDGDS, Supply Division of the General Staff; WPD, War Plans Division of the General Staff; WDMB, War Department Manpower Board. All of these records are now in custody of the Departmental Records Branch, AGO.

War Department directives, such as Army Regulations (AR), Circulars (WD Cir), General Orders (WD GO), Technical Manuals (TM), and Field Manuals (FM) have been cited without location, because complete sets are available in Army Publications Service Branch, AGO, and fairly complete sets are in the Department of Defense Library. The same is true of Army Service Forces circulars and manuals. Similar publications of the Office of the Chief of Transportation will be found in the records of that office. Copies of many such directives will be found also in the records of the Historical Branch, OCT, filed either serially or in appropriate subject files.

Numerous references will be found to the Army Service Forces Monthly Progress Report (ASF MPR), particularly when statistics are involved. This report was issued in a number of sections, but Section 3, Transportation, is the one usually cited in this volume. It was prepared in the Statistics and Progress Branch of the Control Division, OCT, beginning October 1942, from data assembled by that branch. A complete set is in the records of the Historical Branch, OCT, together with a less comprehensive monthly report, Statistical Summary, Transportation Service, which was issued by OCT before the ASF MPR was started.

Minutes and papers of the Joint Board, the Joint Chiefs of Staff, the Combined Chiefs of Staff, and their various committees also have been cited without location. They will be found in the Joint Chiefs of Staff, Research and Records Analysis Section.

A number of published reports, which have been cited repeatedly, have been given abbreviated titles. *Final Report of the Chief of Transportation, Army Service Forces, World War II*, 30 November 1945, has been cited as Gross final rpt. *Civilian War Transport, a Record of the Control of Domestic Traffic Operations by the Office of Defense Transportation, 1941–1946*, has been cited as *Civilian War Transport*. The two biennial reports rendered by the Chief of Staff, U.S. Army, during the war have been cited as *Biennial Rpt, CofS USA;* the page references to the 1941–1943 report are based on the Government Printing Office

edition; those to the 1943–1945 report are based on the text published by Simon and Schuster for the War Department, *The Winning of the War in Europe and the Pacific*.

In citing the monographs which were prepared in the Historical Branch of the Office of the Chief of Transportation as part of its wartime program, only the number of the monograph has been given; the titles will be found in the Bibliographical Note. These monographs are in the records of the Historical Branch, OCT.

As a means of saving space, footnotes have been combined in many instances, rather than documenting each statement separately. As a result, the documents cited in a footnote in some instances are applicable to statements immediately following, as well as those immediately preceding the note.

Again, as a measure of space economy, when a file contains a number of documents relating to a subject, only the more significant documents have been cited. In many instances, therefore, reference to the files will disclose details which it has not been possible to discuss in the text.

Glossary of Technical Terms*

Balanced cargo	A mixture of heavy and light cargo, which approximately fills the cargo space and weighs the ship down to its legal maximum draft.
Bale cubic	The space available for cargo, measured in cubic feet, to the inside of the cargo battens on the frames of the vessel and to the underside of the beams.
Ballast	Heavy material, other than cargo, carried in the hold of a vessel to provide stability.
Balloon cargo	Items which occupy an exceptionally large amount of space in relation to their weight.
Bareboat charter	A form under which the charterer hires the vessel only, and provides the crew, supplies, fuel, and other operating requisites.
Bottom cargo	Dense and heavy cargo, particularly that stowed in the bottom of a ship's hold to improve stability.
Class I installation	One wholly under the command of the service commander. (See service command.)
Class II installation	One under the command of the service commander with certain activities exempted. In general this class included the posts, camps, and stations utilized by the Army Ground Forces.
Class III installation	One under the command of the Army Air Forces, at which the service command performed limited services.
Class IV installation	One under the command of a technical service or staff division of the Army Service Forces, at which the service command performed certain functions.
Combat loader	A vessel specially equipped for combat loading. The Navy provided two types—APA (transport, attack), and AKA (cargo ship, attack).
Combat loading	Loading a ship with an assortment of equipment and supplies required by troops entering combat, and stowing the various items in such a manner that they can be unloaded quickly and in the order needed.

* Like most industries, transportation employs technical terms which are not familiar to the lay reader. Certain Army terms also are not understood outside military circles. The following brief nontechnical definitions will save the reader the inconvenience of seeking explanations elsewhere.

Combat zone	Forward area of a theater of operations, where combat troops are actively engaged.
Communications zone	The part of a theater of operations behind the combat zone, where supply, transportation, and other facilities are located and services performed.
Corps area	One of nine commands in the zone of interior prior to July 1942, with functions similar to those of the service commands. (See service commands.)
Deadweight tonnage	The number of long tons (2,240 pounds) that a ship can transport, including cargo, fuel, water, stores, crew, and passengers.
Dry cargo ship	Any ship, except a tank ship carrying liquids in bulk. As used in World War II the term applied to passenger ships as well as freighters.
Echelons of maintenance	Categories ranging from the first echelon, which included the simpler forms of upkeep, to the fifth, which included the heavier types of repairs. (See ASF Manual M 807, Glossary, 25 Oct 44.)
Explosives cargo	Live ammunition and bulk explosives.
Filler cargo	Packaged and bagged supplies which can be stowed in small and irregularly shaped spaces in the hold of a ship.
Full and down	Term indicating that a vessel has all cargo space filled and that the cargo is sufficiently heavy to take the ship down to the legal maximum draft.
General cargo	Broadly used, the term includes all except bulk cargoes, but in Army usage it may exclude explosives.
Gross tonnage	The internal cubic capacity of a ship's holds, 'tween decks, and permanently enclosed spaces on or above the upper deck (except certain exempted spaces) measured in tons of 100 cubic feet.
Landing craft	A vessel designed to carry troops and combat equipment ashore for a landing attack.
Line haul	Haul over a railroad line, as distinguished from switching.
Long ton	Weight ton of 2,240 pounds; customarily used in connection with ocean freight, whereas the railroads customarily use the short ton of 2,000 pounds.
Measurement ton	40 cubic feet; sometimes called ship ton, since it is used chiefly in connection with ocean transportation.

Service command	One of nine commands in the zone of interior after July 1942 (replacing corps area); a field agency of the Services of Supply, and later of the Army Service Forces. It furnished certain services to other elements of the Army within its area, including administrative, legal, financial, medical, construction, and fixed communications. (See Class I, II, III, and IV installations.)
Short ton	Weight ton of 2,000 pounds, customarily used by the domestic carriers.
Tanker	A tank ship for transporting petroleum products and other liquids in bulk.
Theater of operations	An Army command including the area of actual fighting (combat zone) and the adjacent area utilized for supporting administrative and supply activities (communications zone).
Zone of interior	The area which furnishes manpower and matériel to the forces in theaters of operations. The United States and Canada constituted the zone of interior for the U.S. Army in World War II.

List of Abbreviations*

AAF	Army Air Forces
AAR	Association of American Railroads
ACofS	Assistant Chief of Staff
ACofT	Assistant Chief of Transportation
ACTREP	Activities Report (shipping)
Adm	Administration or Administrative
Adv	Advisory
AEF	American Expeditionary Forces, World War I
AFPAC	U.S. Army Forces, Pacific
AFWESPAC	U.S. Army Forces, Western Pacific
AGO	Adjutant General's Office
AGF	Army Ground Forces
AKA	Cargo ship, attack
Amph	Amphibious
ANMB	Army and Navy Munitions Board
APA	Transport, attack
AR	Army Regulations
ASF	Army Service Forces
ASW	Assistant Secretary of War
ATA	American Trucking Associations
ATS	Army Transport Service
BAS	British Army Staff
BMWT	British Ministry of War Transport
Bn	Battalion
BPE	Boston Port of Embarkation
Bd	Board
Br	Branch
BuPers	Bureau of Personnel (Navy)
BUPERS	Chief, Bureau of Personnel (Navy)
BUSANDA	Chief, Bureau of Supplies and Accounts (Navy)
BuShips	Bureau of Ships (Navy)
BUSHIPS	Chief, Bureau of Ships (Navy)
C	Chief
CAC	Coast Artillery Corps
CCS	Combined Chiefs of Staff
CG	Commanding General
Chm	Chairman
CINCAFPAC	Commander in Chief, U.S. Army Forces, Pacific
CINCPAC	Commander in Chief, U.S. Pacific Fleet
CINCPOA	Commander in Chief, Pacific Ocean Areas
Cir	Circular
Civ	Civilian
CM–IN	Classified message, incoming
CM–OUT	Classified message, outgoing
CMP	Controlled Materials Plan
CMTC	Combined Military Transportation Committee
CO	Commanding Officer
CofCWS	Chief, Chemical Warfare Service
CE	Corps of Engineers
CofEngrs	Chief of Engineers
CNO	Chief of Naval Operations
CofOrd	Chief of Ordnance
CofS	Chief of Staff

* Abbreviations have been used extensively in the footnotes in order to save space, and they have been employed in a limited way in the text. Insofar as practicable, these abbreviations conform to War Department Technical Manual, TM 20–205, Dictionary of United States Army Terms, issued 18 January 1944. This list will help the reader to whom the meaning of certain abbreviations is not at once apparent.

CofT	Chief of Transportation Corps
Com	Committee or Commission
Comdr	Commander
Comdt	Commandant
COMINCH	Commander in Chief, United States Fleet
Coml	Commercial
COMZONE	Communications zone
Conf	Conference
Cons	Construction
Conv	Conversion or Conversation
CPE	Charleston (S. C.) Port of Embarkation
CRO	Chief Regulating Officer
CSAB	Combined Shipping Adjustment Board
CWS	Chemical Warfare Service
DC	Deputy Chief
DCofS	Deputy Chief of Staff
DCofT	Deputy Chief of Transportation
Dir	Director
Dist	Distribution or District
Div	Division
DWT	Deadweight tons or tonnage
EM	Enlisted men
Emb	Embarkation
EO	Executive Order
Equip	Equipment
ESF	Eastern Sea Frontier (Navy)
Estab	Establishment
ETO	European Theater of Operations
ETOUSA	European Theater of Operations, U.S. Army
Exec	Executive
FM	Field Manual
FY	Fiscal Year
G–1	Personnel Division, War Department General Staff
G–2	Military Intelligence Division, War Department General Staff
G–3	Organization and Training Division, War Department General Staff
G–4	Supply Division, War Department General Staff
Gen	General
Geog	Geographical
GHQ	General Headquarters
GO	General Order
GSUSA	General Staff, U.S. Army
GT	Gross tons or tonnage
HB	Historical Branch, Office of the Chief of Transportation
Hist	Historical
Hosp	Hospital
Hq	Headquarters
HR	House of Representatives
H. Res.	House Resolution
HRPE	Hampton Roads Port of Embarkation
HTAC	Highway Traffic Advisory Committee
Hwy	Highway
ICC	Interstate Commerce Commission
Incl	Inclosure
Ind	Industrial or Indorsement
Info	Information
Insp	Inspection or Inspector
Int	Intelligence
JAG	Judge Advocate General
JAGD	Judge Advocate General's Department
JB	Joint Board (Army and Navy)
JCS	Joint Chiefs of Staff
JLC	Joint Logistics Committee
JMPA	Joint Military Passenger Agreement

JMTC	Joint Military Transportation Committee
JPC	Joint Planning Committee
JPS	Joint Staff Planners
JSM	Joint Staff Mission
LAPE	Los Angeles Port of Embarkation
LST	Landing ship, tank
LT	Long ton—2,240 pounds
Mar Com	Maritime Commission
Mil	Military
MPR	Monthly Progress Report
MRS	Military Railway Service
MT	Measurement ton—40 cubic feet
Mtg	Meeting
MTO	Mediterranean Theater of Operations
MTOUSA	Mediterranean Theater of Operations, U.S. Army
MTS	Military Transportation Section, Association of American Railroads
Mvmt	Movement
NAMBO	National Association of Motor Bus Operators
NATO	North African Theater of Operations
NATOUSA	North African Theater of Operations, U.S. Army
NIG	Naval Inspector General
NOPE	New Orleans Port of Embarkation
NTS	Naval Transportation Service
NYPE	New York Port of Embarkation
OCofEngrs	Office of the Chief of Engineers
OCMH	Office of the Chief of Military History
OCS	Office of the Chief of Staff
OCT	Office of the Chief of Transportation
Ord Dept	Ordnance Department
ODT	Office of Defense Transportation
Off	Officer
OPA	Office of Price Administration
OPD	Operations Division, War Department General Staff
OPM	Office of Production Management
Opn	Operation
OQMG	Office of the Quartermaster General
Org	Organization or Organizational
OWM	Office of War Mobilization
P&O	Plans and Operations Division, General Staff, U.S. Army
PAW	Petroleum Administration for War
PE	Port of Embarkation
Pers	Personnel
PL	Public Law
Plng	Planning
POA	Pacific Ocean Areas
PRA	Public Roads Administration
Prod	Production
Prog	Progress
QMG	The Quartermaster General
Rec	Record
Reg	Regulation
Reorg	Reorganization
Req	Requirements
RR	Railroad
Ry	Railway
S	Senate
Secy	Secretary
SFPE	San Francisco Port of Embarkation

SGO	Surgeon General's Office
SN	Secretary of the Navy
SOLOC	Southern Lines of Communications
SOS	Services of Supply
Sp	Special
SPE	Seattle Port of Embarkation
SSUSA	Special Staff, U.S. Army
Stor	Storage
Sv	Service
SvC	Service Command
SW	Secretary of War
SWPA	Southwest Pacific Area
TAG	The Adjutant General
TC	Transportation Corps
Tech	Technical
TM	Technical Manual
Tng	Training
T/O	Tables of Organization
T/O&E	Tables of Organization and Equipment
Tr	Troop
Traf	Traffic
Trans	Transportation
TZ	Transportation Zone
USA	United States Army
USAFBI	U.S. Army Forces in the British Isles
USAFFE	U.S. Forces in the Far East
USASOS	U.S. Army, Services of Supply
USCG	U.S. Coast Guard
USF	U.S. Fleet
USN	U.S. Navy
USSR	Union of Soviet Socialist Republics
USW	Under Secretary of War
WESPAC	Western Pacific
WDGS	War Department General Staff
WDMB	War Department Manpower Board
WMC	War Manpower Commission
WPB	War Production Board
WPD	War Plans Division, War Department General Staff
WSA	War Shipping Administration
WSF	Western Sea Frontier (Navy)
ZI	Zone of interior
ZTO	Zone Transportation Officer

UNITED STATES ARMY IN WORLD WAR II

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The War Against Germany: Europe and Adjacent Areas
The War Against Japan

Index

ABC motor express route, 91
Accidents. *See* Safety.
Administrative Division, OCT, 418
Administrative Supervision of field installations, 126–32
Administrative vehicles, 402–05
"Admirals" (troopships), 222
Advisory Commission to the Council of National Defense, 39, 328
Aerial ports of embarkation, 51–53, 67
Africa, 11, 12. *See also* North Africa.
Agreement of enrollment for seamen, 259.
Air Corps. *See* Army Air Forces.
Air coverage, for convoys, 214
Air express, 369
Air Force. *See* Army Air Forces.
Air freight regulating officers, 119, 119n
Air officers, port, 106
Air Priorities Branch, OCT, 51
Air Section, G–4, 48
Air Service Command, 106, 382
Air Transport Command, 15, 67, 369
Aircraft, commercial, 369–70
Aircraft carriers, 146–47
Aircraft repair ships, 301
Aird, Col. William A., 423
AKA's. *See* Combat loaders.
Alaska, 8, 9, 12, 200
Alaska Barge Service, 250
Alaska Railroad, 9
Alcan Highway, 8
Aliens, employed as civilian crew members, 233–35, 235n
Ambulance car, 386
America, 146
American Railway Association, 30, 312
American Trucking Associations, 354, 355, 358
Ammunition, loading of, 277. *See also* Explosives.
Amphibian truck companies, 88, 109
Amphibious assault, adds to transportation load, 12–14
Amphibious operations, preparations for, 144–48
Anderson, Col. Richard F., 424
Andes, 222
Anthony, George A., 305
Antisubmarine measures. *See* Submarines, German.
Antitrust laws, 310
Antwerp, 288, 289
APA's. *See* Combat loaders.
Appleton, Col. John A., 326
Aquitania, 6, 222, 226
ARCADIA, 6
Argentina, 222
Armament for Army vessels, 245–46
Army Air Forces, 15, 58, 119, 178, 257, 378, 379, 382, 396, 401, 402–03
  aerial ports of embarkation, 51–53, 119
  aircraft and personnel, 14–15
  delegation of authority to, 59–62
  demands on land and water transportation, 15
  field agencies duplicate TC functions, 60–62
  given control over movements by air, 51
  rescue and airplane retrieving vessels, 249, 254, 255
Army air traffic, control restored to TC, 67–68
Army cargoes. *See* Cargo ships; Loading.
"Army days" in port, 281
Army Embarkation Service, World War I, 31, 32
Army hospital cars. *See* Hospital cars.
Army installations, rail services at, 316–17
Army and Navy Munitions Board, 40, 45, 177, 396
Army-Navy Petroleum Board, 72
Army-Navy relations, 200–11
  differences in logistical systems, 205
  effort to co-ordinate activities, 169–72, 182–84, 205–11
  joint exercises, 1940–41, 144–48
  Navy manning of Army vessels, 200–02, 206–08
  unification of transportation operations, 203–05
Army-Navy Shipping Information Agencies, 211
Army regulating stations, 46
Army Reorganization Act of 1920, 35
Army reservation bureaus, 117, 122
Army Service Forces, 50, 55
  Commanding General, 50, 78–80
  Director of Matériel, 378
  Director of Operations, 20, 80–81
  established, 49–50
  planning role, 19–20
  relation of OCT with other ASF elements, 78–82, 103–05
Army tank cars. *See* Tank cars.
Army Transport Service, 29, 30, 42, 107–09, 136–44, 145–46, 205–09, 229–39, 262–63. *See also* Water Division.
Army War Ship Repair Contract Agency, 303
Asiatic Theater, 253
Assistant Chief of Staff, G–4, 38, 40, 46, 142
Assistant Secretary of War, 38, 39, 177
Association of American Railroads, 42, 47, 79, 312–53, *passim.*
  confidence in ability to cope with wartime demands, 320
Atlantic Convoy Conference, 212
Atlantic Oversea Service Command, 104
Atterbury, Brig. Gen. W. W., 34n

Australia, 5, 7, 11, 283
Auto haulers, converted into passenger carriers, 394–95, 400
Automobiles, pool riding, 396

Back-hauling, 344, 345
Bagnall, Col. Henry D., 424
Baldwin, L. W., 351
Bale cubic capacities, percentage of utilization, 276–79
Baltimore, Md., cargo port, 73, 96, 97n, 99, 110
Barthrop, Lt. Col. John A., 303
Baruch, Bernard M., 396
Base depot companies, 90
Basic Logistical Plan, 170–71, 183, 210
Bates, Col. Marsden V., 424
Bayonne (N. J.) Terminal, 177
Board of Economic Warfare, 196
Board of Engineers for Rivers and Harbors, 250
Boats, small
- acquisition of, 251–53
- assignment of, 254
- critical need in Pacific, 251
- delivery crews for, 257
- individual contract for crew members, 258–59
- operation and maintenance, 254–55
- requirements for, 250–53
- training of crews, 256–57

Boone, Col. Abbott, 423
Boone, Col. H. A., 424
Boston Port of Embarkation, 44, 46, 97, 99, 110
Boston Quartermaster Depot, 107
Bottom cargo, defined, 194n
Brazil, 222
British Master Agreement, 220
British Ministry of Shipping, 31, 187
British Ministry of War Transport, 44, 168, 181, 187, 221, 226, 227, 274
British shipbuilding, 154–55
British shipping
- minimum standards for troopships, 225
- repairs in U. S., 184
- requirements of British import program, 222
- tonnage of, 136
- use by U. S. Army, 220, 224, 226–27

British-American conferences, 3, 164–65, 165n
Brooklyn Army Base, 106
Budd, Ralph, 328, 351
Buford, Charles H., 324, 350
Bunting, Col. Geoffrey C., 71
Bureau of the Budget, 139, 154, 188, 190, 198
Bureau of Economic Warfare, 167
Burma Road, 11
Buses, Army pool of
- allocation of vehicles, 401–02
- authority for, 397
- establishment of, 394
- fares, 400–01

Buses, Army pool of—Continued
- operating arrangements, 400
- types of vehicles, 398–400

Buses, commercial, use by Army, 354, 357–59
Byrnes, James F., 305–06

Camp Claiborne, La., 124
Camp Gordon Johnston, Fla., 124, 256
Camp Plauché, La., 109
Camp Shelby, Miss., 124
Camp Stoneman, Calif., 124
Canadian National Railways, 8, 9
Canadian subports, 97, 97n
Canol project, 8
Car efficiency committees, 342
Car loading forecasts, 315–16
Car Service Division, AAR, 312–13
Cargo Clearance Committee, 40
Cargo discharge performance, oversea areas, 298
Cargo loading costs. *See* Loading costs.
Cargo manifests, 86
Cargo pallets, 14n
Cargo pooling, 193–95
Cargo ports of embarkation, defined, 96
Cargo ships
- allocated by WSA, 195–97
- controversy between Army and WSA over loading of, 190–92
- efficient utilization of, 273–82
- effort to maintain balance with troop carriers, 4

Casablanca Conference, 4, 208, 222
Central America, 9
Central Pacific, 171, 173
Certificate of preference, 371
Certificates of war necessity, 364
Charleston, S. C., Port of Embarkation, 41, 46, 96, 99, 110, 256
Chartering of vessels, 139, 143, 189, 198–99
Chemical Warfare Service, 301, 378, 380, 381, 382, 383, 404
Chemicals, transport of, 381, 383
Cherbourg, 12
Chief Regulating Officer, GHQ, SWPA, 293, 294
Chief of Transportation, Office of. *See also* Gross, Maj. Gen. Charles P.
- creation of, 55
- delegation of authority to the Army Air Forces, 59–62
- organization, 68–73
- personnel, 73–74
- policies of Chief of Transportation, 73–78
- relations with other elements of the Army Service Forces, 78–82
- relations with the oversea commands, 82–94
- responsibilities, 57–58, 62–68

China, 7, 9, 26
Churchill, Manitoba, 97n

Churchill, Winston, 4, 5
conferences with Roosevelt on utilization of shipping, 168, 221
initiation of American-British planning, 18
and the shipbuilding program, 155
on U-boat danger, 151
and utilization of shipping, 165, 168
CIO maritime unions, 193
Civil Aeronautics Administration, 39
Civil service, 230, 232–33, 259
Civil Service Commission, 232
Civil Service Retirement Act, 230
Civilian crews, 32, 206. *See also* Crews.
Army relations with unions, 229–33, 237
crew discipline, 238
draft deferment, 235
grievance procedures, 237
manning scales, 233
promotion of welfare, 236–37
proposals regarding, 260–61
recruiting of, 233–36
safeguards against subversive activities, 237–38, 237n
ship transportation agent, 238–39, 239n
for small boats, 255–60
troubled relations with enlisted men, 246
Civilian Marine School (New Orleans), 235
Civilian passengers, 199
Civilian Personnel Division, OCT, 237
Civilian population, supplies for, 16
Claiborne and Polk Military Railway, 124
CLARION, 25n
Clay, Maj. Gen. Lucius D., 362
Clement, Martin W., 350
Coast Artillery Corps, 245, 246, 249, 254, 255
Coast Guard, 203, 224, 237n, 238, 239, 255, 256, 266, 270, 300
Coastwise convoys, establishment of, 217
Coastwise Transportation Service, theater of operations, 83
Combat loaders (AKA's and APA's), 158, 160–61
cargo vessels and troopships converted to, 299
conversion of Army transports to, 146–47
Combat loading, 144, 144n
defined, 144n
difference of opinion over control of, 144–45
lack of preparation for, 1940–41, 144, 144n
method of, 14
Combined Chiefs of Staff, 19, 413
begins functioning, 18
planning role, 19
relation to American ship construction program, 163
role in allocation of shipping, 165, 167
works out maximum assignment of ships for MacArthur, 284
Combined Military Transportation Committee, 19, 413
Combined Military Trans. Committee—Continued
and convoys, 217
relation to American ship construction program, 163
role in allocation of shipping, 167, 168–69
Combined Shipping Adjustment Board, 164–65, 168, 221, 222, 225–26, 229
Commercial carriers, utilization of, 308–74
Commercial traffic agencies, 41, 53, 111–12
Commercial Traffic Branch, OQMG, 35, 37, 42, 47, 49, 111, 356, 358, 359, 368, 381, 382, 385, 391
Commercial vessels, use by Army, 140, 142
Committee on Standardization for Army Vessels, 242
"Commodity loaded" vessels, 276n, 290–91
Commodity rates under stevedoring contracts, 270–71
Congress, 34–35, 397, 407
Construction Division, OQMG, 316
Contracting stevedores, 262–63, 264–66
Control
of port utilization, 176–81
of portbound freight traffic, 41, 46–47, 373, 412
of ship employment, 163–76
of ship repair, 181–85
of ship utilization in the theaters, 282–99
Control Division, OCT, 86, 101, 129–32, 281, 285, 416–17
Controlled Materials Plan, 306
Controller of Shipbuilding, 160
Conversions, ship. *See* Ship conversions.
Convoys. *See also* Naval convoy arrangements.
in Atlantic, 214–19
early convoy operations, 152, 212–14
and North African campaign, 216, 217
organization and operation of, 216–17, 219–20
to Pacific, 5, 212–13, 214
Coordinator of Ship Repair and Conversion, 182, 183–84, 185, 306–07
Cordiner, Col. Douglas C., 37
Corey, Col. Alexander, 261
Corps of Engineers. *See* Engineers, Corps of.
Coughlin, Col. Leo J., 289
Council of National Defense, 39
Crane, Lt. Col. Joseph S., 211
Crews. *See also* Naval crews for Army transports; Civilian crews.
discipline, 238
for ocean-going vessels, 229–39, 260
for small boats, 255–60
Cross-Channel operation. *See* OVERLORD; ROUNDUP.
Cross-hauling, 344–45, 348
Cruiser and Transport Force, WWI, 33

Dann, Alexander, 367–68
Davis, Col. R. Bramwell, 227

Deadweight capacities, percentage of utilization, 276–79
Deck spaces, utilization of, 276
Defense Plant Corporation, 334,367
Defense Transportation. *See* Office of Defense Transportation.
Demobilization planning and adjustments, 132–34
Demurrage charges, 342, 343–44
Denney, C. E., 351
Denson, Brig. Gen. Eley P., 423
Depots, general, removed from Army bases at ports, 106–07
Depots, intermediate, in ETO, 289
Depots, TC, 124–25, 133
Deputy Chief Regulating Officer, GHQ, SWPA, 294
Deputy Chief of Staff, supports AAF position, 59–61
Deputy port commander, 101
Design and procurement
  of equipment for utility railroads, 376
  of hospital cars, 385–90
  of motor vehicles, 37n, 66–67
  for ship conversions, 305, 306
Destructiveness of modern warfare, 15–16
Devers, Lt. Gen. Jacob L., 76
DeWitt, Brig. Gen. Calvin, Jr., 423
Diesel locomotives, shortage of, 332, 376, 378. *See also* Locomotives.
Dillon, Brig. Gen. Theodore H., 37, 50, 70
Director of Defense Transportation, 45
Director of Economic Stabilization, 352
Director of Matériel and Supply, OCT, 71, 416
Director of Military Training, OCT, 22, 71, 416
Director of Operations, OCT, 70–71, 101, 126, 162, 219–20, 220n, 415
Director of Personnel, OCT, 71, 416
Director of Railway Training, 65
Director of Supply, OCT, 22, 120, 125, 253, 257, 392
Director of Traffic and Transportation, AAF, 59
Director of War Mobilization, 253–54, 295, 305, 306, 339
Director of Water Transportation, OCT, 71, 162, 416
Discharge procedure, of civilian crew members, 231
Discipline
  of armed guard, 246
  of crews, 238
Distribution Division, OCT, 125, 403
District transportation offices, 114, 120, 425
Diversion Committee, ETOUSA, 289
Division of Defense Aid Reports, 39, 40, 112
Division of Local Transport, ODT, 394
Dock labor, 262–63
Documentation of shipments, 117
Doenitz, Grossadmiral Karl, 153
Domestic commercial carriers, utilization of, 308–74
Douglas, Lewis W., 189, 190, 191, 192, 194, 195, 199
Draft. *See* Selective Service.
Duke, Brig. Gen. James T., 423

Eastman, Joseph B., 45, 311, 336n, 337n, 370, 370n, 371, 372, 373
Edmund B. Alexander, 222
Egypt, 6
Eisenhower, Gen. Dwight D., 66, 76, 84, 289, 339
  on attack on German transportation system, 25n
  favors control of military railways by TC, 63
  and problem of ship detention, 288
Embarkation Service, WWI, 29–32
Empress of Scotland, 222
Engineer port repair ships, 301
Engineering Branch, Highway Division, OCT, 366
Engineers, Corps of, 33–34, 47, 58, 83, 87, 106, 250, 253, 317, 317n, 318, 366, 367, 386, 389, 404, 406, 408
  and military railroads, 35, 62–65
  and utility railroads, 375, 376
Escort vessels, 160. *See also* Convoys.
Europa, 226
European theater, 253
  cargo discharge performance rate in, 298
  functions of CofT, 84
  problem of ship detention in, 286–91
Evangeline, 230
Excursion Inlet, Alaska, subport at, 97, 100, 250
Executive Officer, OCT, functions, 72, 415
Explosives, loading of, 100, 266–69. *See also* Ammunition.
Exports Control Committee, WWI, 31

Fairbanks, Alaska, 8, 9
Farr, Col. Donald E., 227
Federal Highway Act of 1944, 366
Federal Loan Administrator, 329
Federal regulating agencies, relations with, 370–74
Field establishment of TC, 95–134
  demobilization planning and adjustments, 132–34
  intelligence and security, 128–29
  miscellaneous field agencies, 123–26
  ports of embarkation, 95–111
  supervision by OCT, 126–32
  transportation zones, 111–23
Field service regulations, revision of, 83
Filler cargo, defined, 194n
Finlay, Col. Luke W., 72, 350
Finschhafen, New Guinea, 293
Fiscal Director, ASF, 239
Fiscal Division, OCT, 418
Fisher, Col. G. J. G., 227
Floating maintenance shops, 301
Floating refrigeration facilities, 301
Floating spare part depots, 90

Floating warehouses, 301
Florida, 230
Fog, effect on convoys, 216, 217
Food, on transports and hospital ships, 209, 243–45
Foreign Economic Administration, 184
Foreign ships, 221, 226. *See also* British shipping.
Fort Benning, Ga., 391
Fort Francis E. Warren, Wyo., 124
Fort Mason, Calif., 106
Fort Slocum, N. Y., 124
Fort Snelling, Minn., 65
Fourth Service Command, 124
Franklin, Maj. Gen. John M., 71, 140, 281, 287–89
Freight cars, 328–29
  efficient utilization of, 342–47
  forecasts of requirements, 315–16
  shortage, 333
Freight traffic, growth during war period, 319–23
Freight Traffic Branch, OCT, 368
Frink, Maj. Gen. James L., 294
Full crew laws, 349
"Full and down" loading, 189, 273
Fuller, Maj. Gen. J. C. F., 17n
Furloughs to relieve railroad manpower shortage, 339–40, 339n

G–1, WDGS, 338
G–4, WDGS, 37, 39, 41, 49, 61, 68, 84, 145, 146, 147, 178, 179, 200, 201, 212–13, 245–46, 288, 294, 406. *See also* Transportation Branch of G–4.
Garsaud, Col. Marcel, 424
Gasoline, 8, 394, 395, 396
Gass, Arthur H., 313
"Generals" (troopships), 222
George Washington, 222
Germany. *See also* Submarines.
  effect of war on transportation systems, 23–26
  transportation advantages, 23–26, 27
  underestimates transportation problems, 18
Gilbreath, Maj. Gen. Frederick, 423
Graham, Col. James H., 81
Gray, Brig. Gen. Carl R., Jr., 65
Gray, Col. E. B., 424
Great Britain. *See* British.
Great Lakes, traffic on, 367, 369
Green, Col. Henry L., 424
Greenland, 12
Grening, Paul C., 260–61, 260n
Grievance procedures for civilian seamen, 231, 236–37
Groninger, Maj. Gen. H. M., 105, 423
Gross, Maj. Gen. Charles P., 45–46, 57–68. *See also* Chief of Transportation, Office of.
  designated Chief, Transportation Section, G–4, 38
  designated Chief of Transportation, 50
  personality and policies, 73–78
Gross, Maj. Gen. Charles P.—Continued
  relations with Somervell, 78–80
Gun crews, and armament, 245–46
GYMNAST, 6
Halifax, Nova Scotia, subport at, 97
Hampton Roads, Va., Port of Embarkation, 53, 96–97, 99, 110
Hanley, Col. John C. P., 424
Harbor Boat Branch, OCT, 210, 254
"Harbor boats." *See* Boats, small.
Harbor craft companies, 256–57
Hardt, Col. Dan A., 424
Harriman, W. Averell, 165n
Hastings, Col. Wallace H., 424
Hawaii, 7, 11, 47
Health and morale of troops, 16–17
Herbert, Brig. Gen. J. K., 105
Hermitage, 222
Hicks, Col. Raymond M., 210, 304
Higashi-Kuni, Premier Naruhiko, 26
Highway carriers, 353–67
  affected by strikes, 364–66
  highway improvement projects, 366–67
  manpower problem, 363–64
  operating controls on, 364
  shortage of equipment, 361–63
  state regulation, 355–56
  used for troop movements, 357–58
Highway Division, OCT, 113, 363, 366, 394–95, 398, 401, 403, 404–05, 422
Highway Traffic Advisory Committee, 40, 355–56
Highway transport in overseas commands, 91–93
Hill, Arthur M., 358
Hines, Brig. Gen. Frank T., 34
Hodson, Brig. Gen. Fremont B., 70, 423
Holabird Quartermaster Depot, 391, 393
Holder, Col. John H., 303, 303n
Holding and reconsignment points, 41, 46, 53, 112, 114, 116, 118, 425
Hollandia, New Guinea, 293
Honolulu, convoys to discontinued, 214
Hood, J. M., 350
Hopkins, Harry, 44, 44n, 163, 168, 188
Horne, Admiral Frederick J., 162, 172
Horner, Col. Frederick C., 395
Hospital cars, 385–91
  hospital kitchen cars, 387, 390
  jurisdiction over, 389–90
  repairs, 393
Hospital ships
  conversion of ships into, 301, 305–06
  food service on, 243–45
Hunter, Brig. Gen. George B., 423

Iceland, 5, 12
Ile de France, 222
India, 11
India-Burma, 298

Indiantown Gap Military Reservation, 123
Industrial Personnel Division, OCT, 127–28, 233, 235, 257, 258, 364, 419
Industrial relations officers, 120
Ingersoll, Admiral Royal E., 174
Inland traffic
centralized control by Army, 314
distribution and control on national scale, 308–11
Inland Traffic Division, WWI, 31
Inland Traffic Service, WWI, 31–32
Inland Waterway Branch, OCT, 368–69
Inspection, 209, 235, 239–40, 241. *See also* Safety.
of ship conversions, 304
of troopships, 224–25, 240
of utility railroads, 379, 380, 381
Installations. *See also* Field establishment of TC.
classes of, 119, 244, 402, 403
inactivated, 132–33
Insurance, of civilian seamen, 236
Insurance costs, and stevedoring contracts, 271
Intelligence, at field installations, 128–29
Intelligence and Security Division, OCT, 128–29, 418
Intercoastal service of Army discontinued, 141
Interdepartmental Shipping Priorities Advisory Committee, 40–41
International Division, OCT, 417
Interstate Commerce Act, 371
Interstate Commerce Commission, 342, 348, 349, 351, 353, 355, 367, 370–71, 372–73, 410
increased authority, 370
relations with TC and ODT, 370–74
Interterritorial Military Committee, 314
Italian Service Units, 56, 110, 264

Japan, 2
effect of war on transportation, 26
logistic problems, 18
steel production, 26
transportation advantages, 26–27
Jeffers, William M., 396
Jenks, W. J., 351
Job classifications at TC field installations, 127–28
John Ericsson, 222
Johnson, J. Monroe, 337n, 348, 370–71, 372–73
Johnston, Alvanley, 350
Joint Army and Navy Basic War Plan, 200
Joint Army-Navy-WSA Ship Operations Committee, 171–72
Joint Board, 145, 146, 147, 160
Joint Chiefs of Staff, 217, 283, 293, 295, 296–97, 299, 300, 413
basic tasks of, 19
and controversy with WSA over loading of cargo vessels, 191
long-range military planning, 19
role in allocation of shipping, 165–68, 169–72, 173, 174–75
Joint Chiefs of Staff—Continued
and ship conversion program, 299–300, 299n
and shipbuilding programs, 160
and theater shipping crisis, 295–97
"Joint Logistics Plan for the Support of United States Bases in the South Pacific," 170
Joint Logistics Plans Committee, 251
Joint Merchant Vessel Board, 211
Joint Military Passenger Agreement, 354, 357, 369
Joint Military Transportation Committee, 19, 295–97, 413
Army representatives on, 162
and convoys, 217
and merchant shipbuilding programs, 162
role in control of employment of shipping, 167–68, 169, 173
Joint Planning Committee, 160
Joint Production Survey Committee, 251
Joint Ship Repair and Conversion Policy Board, 184
Joint Strategic Survey Committee, 8
Joint U.S.-British Planning Committee, 220
Jordan, Brig. Gen. Richard H., 37
Judge Advocate General, 54, 141
Juneau, Alaska, subport, 53, 97, 99, 100, 250

Kamchatka Peninsula, 9n
Kells, Maj. Gen. Clarence H., 423
Kendall, Warren C., 350
Kilpatrick, Brig. Gen. John R., 423
King, Admiral Ernest J., 9n, 163n
and assignment of small boats, 251
and convoy arrangements, 213, 214, 217, 218
and shipbuilding program, 160
on war against German submarines, 151, 152
Kitchen cars, 334, 387, 389
Knock-for-knock agreement, 221, 221n
Kojassar, Col. Aram, 127
Korea, 394
Kunming, 11

Labor policy governing vessels, 231
Labor supply, and port utilization, 180
Lafayette (ex-*Normandie*), 201, 201n
Land, Rear Adm. Emory S., 165n, 188, 192, 221
and shipbuilding program, 162
and Strategic Shipping Board, 44
Land-based air coverage, 152
Landing craft, 144–45, 251, 251n
Lasher, Col. Edmund C. R., 314, 424
Leahy, Admiral William D., 167, 192
Leathers, Frederick James, Baron of Purfleet, 165n, 187, 222
Leavey, Maj. Gen. Edmond H., 66
Lee, Lt. Gen. John C. H., 289
Legal Division, OCT, 418
Le Havre, 289
Lend-lease, 4–5, 111–12, 164

Lend-Lease Act, 39, 220–21, 225, 314–15, 219–20
Lewis, Brig. Gen. Burton O., 71
Leyte, 14n, 291–92
Liberty ships
converted for troops and PW's, 300–01, 301n
loading of, 273
production of, 156
Loading. *See also* Cargo pooling; Pier operations.
controversy with WSA, 190–93
cost of loading cargo ships, 267–69
efficient loading of cargo vessels, 273–79
of freight cars, 321, 345–47, 347n
of passenger cars, 348
Locomotives, 328
repairs on, 393
shortage, 331–32, 376
Longshore labor, shortage, 263–64, 281
Longshore unions, 268–69
Lord, Maj. Gen. Royal B., 288
Los Angeles Port of Embarkation, 97, 99, 110
Lurline, 222
Lutes, Maj. Gen. Le Roy, 326
Luzon, 8

MacArthur, Gen. Douglas, 77, 256
and central control of ship employment, 174–76
designated CINCAFPAC, 174
pleads for additional vessels, 5, 284
takes responsibility for shipping congestion in SWPA, 295
urged to reduce ship retentions, 292, 297–98
McCloy, John J., 199
MacDonald, Thomas H., 355
McFadden, Col. M. A., 424
McGrady, Edward F., 230
McIntyre, Col. Andrew F., 350
McKenzie, Daniel J., 270
McTammaney, Col. Edward A., 424
Maddux, Col. Rufus F., 423
Maintenance and Repair Branch, OCT, 304–05
Maintenance Division, OCT, 420
Manchuria, 26
Maneuvers, motor vehicles used in, 357–59
Manhattan, 146
Manila, 12. *See also* Philippines.
shipping congestion at, 297
Manning scales
for small boats, 257
for transports, 233
Manpower. *See also* Crews; Personnel.
for highway carriers, 363
for railroads, 335–41
Marietta, Pa., 41
Marine Design, Construction, and Procurement Branch, OQMG, 37
Marine Officer Cadet School, St. Petersburg, Fla., 124, 235, 256–57
Marine Personnel Regulations, 232, 233, 259
Marine repair ships, 301
Mariposa, 222
Maritime Commission
and allocation of shipping, 163–64
and early shipping requirements, 138–43
and shipbuilding achievement, 155–59
Maritime labor unions, 128
Maritime War Emergency Board, 230
Marseille, port congestion at, 291
Marshall, Gen. George C., 1, 3n, 15, 44n, 163, 192, 213, 214, 215n, 315, 315n
Marshall, Brig. Gen. James C., 423
Martin, Col. Charles E., 71
Martin, Col. Lincoln, 424
Master mechanics, 380–81
Master ship repair contract, 183
Mauretania, 222
Mechanization of armed forces, 2–3
Mediterranean theater, 20
cargo discharge performance, 298
port congestion in, 291
ship detention in, 285–86
Memorandum on interdepartmental relationship, 189–90, 189n, 198–99
Merchant Marine Act of 1936, 39, 153, 154
Merchant Marine Distinguished Service Medal, 237
Metzman, Gustav, 324
Mexican laborers, 336, 338
Mexico, National Railways of, 9
Meyer, Col. Richard D., 220n
Middle East, 4, 11, 22
Middle Pacific, 298
Military Personnel Division, OCT, 127, 419
Military Railway Service, 62, 63, 64, 65, 83, 84, 88, 91, 123, 337, 338, 341, 352
Military Training Division, OCT, 65, 418–19
Military Transportation Section, AAR, 42, 313, 315, 361
Military tribunals, 238
Miller, Col. Stewart F., 424
Mine laying vessels, 254, 255
Mississippi State College, 124
Mobile, Ala., subport at, 53, 97
Mobile ports of embarkation, 96
Monterey, 222
Monticello, 222
Montreal, subport at, 97
Moore, Col. Werner W., 199–200
Morris, Col. I. Sewell, 424
Motor carriers, 117, 310–11, 353–67
Motor equipment for the Army, 66–67
Motor Transport Branch, OQMG, 37
Motor Transport Corps, WWI, 32, 33
Motor vehicles. *See also* Buses; Trucks.
administrative, 402–05
state laws affecting, 355–56
Motorization of the Army, 14, 14n
Mount Vernon, 146, 147, 222

Movements Division, OCT, 126, 219–20, 222, 225, 227, 417

Naples, 12, 291
National Association of Motor Bus Operators, 354, 358, 361
National Bus Military Bureau, 361
National Bus Traffic Association, 361
National Inter-regional Highway Committee, 366–67
National Production Urgency List, 340
National Railways of Mexico, 9
National Service Law, 341
Naval convoy and routing arrangements, 212–20
Naval crews for Army transports, 32–33, 205–09, 245–46
Naval Transportation Service, 142, 196, 206, 208, 208n, 210, 211
Navigation and inspection laws, 239
Navy, U.S.
  alterations on Army troopships, 207–08
  relations with Army, 200–11, 412–13
Neutrality Act, 319
New Caledonia, 5
New Guinea, 11
New Orleans General Depot, 107
New Orleans Port of Embarkation, 41, 65, 96, 109, 110, 123, 179, 230, 256
New River, N. C., joint exercises at, 147
New York General Depot, 106–07
New York Port of Embarkation, 29, 29n, 41, 46, 77, 99, 100, 109, 110, 256
New Zealand, 5
Newport News, Va., primary port in WWI, 29, 29n
News transmission ship, 301
Nielsen, Col. Charles F., 61
Nieuw Amsterdam, 222
Nimitz, Admiral Chester W., 174–76
Noble, Col. William H., 424
Nonessential travel, restriction of, 75, 311
Normandie. See Lafayette.
Normandy, 11
Norris, E. E., 351
North Africa, 4, 6, 7, 25–26, 83, 85, 90
  convoy problems, 216
  ship detention in, 285–86

Ocean Shipping Section, ANMB, 178–79
Ocean Traffic Branch, OCT, 179, 196
Office of the Chief Engineer. *See* Engineers, Corps of.
Office of the Chief of Transportation. *See* Chief of Transportation, Office of.
Office of Defense Transportation, 47, 179, 181, 187, 311, 312, 324–26, 338, 340, 410–12
  creation of, 45
  functions, 370
  relations with ICC, 370–73
  relations with TC, 370–74, 410–12
Office of Lend-Lease Administration, 112
Office of Production Management, 40–41, 188
Office of War Information, 339
Office of War Mobilization, 338
Officer candidate school, TC, 54–55, 85, 85n, 124
Officer personnel, 76, 85, 85n
Officer training schools, TC, 109–10, 124
Oil. *See* Petroleum.
Operating personnel index, 127, 127n
Operations Division, WDGS, 19, 169, 272, 409
Operations Officer. *See* Director of Operations, OCT.
Ordnance Department, 58, 66–67, 91, 106, 367–68, 376, 378–79, 380, 381, 382–83, 384, 391, 396, 397, 401, 403, 404
OVERLORD, 7
Oversea Operations Group, OCT, 76
Oversea supply, control by port commanders, 101, 104–05, 205
Oversea troop movements, 86–87
Overseas commands, Gross's relation with, 76–77, 82–94. *See also* Theaters.
Overtime for civilian crews, 230, 231n, 231–32, 258

Pacific Coast Joint Committee for Shipbuilding and Repair, 172n, 183
Pacific Ocean Areas, 75, 173, 174, 251, 296
Panama Canal, 9
Panama Canal Department, 41
Pan-American Highway, 9, 58
Pasteur, 222
Patrick Henry, 156
Patterson, Robert P., 10
Pearl Harbor, 35–42, 314–15
Pelley, J. J., 314, 324, 350
Perry, Col. Charles F., 424
Persian Corridor, 11–12
Persian Gulf, 12, 20–22, 393
Personnel. *See also* Crews; Marine personnel; Officer personnel.
  detailed to theater commanders by CofT, 57–58
  distribution of, OCT, 73, 74
  drawn from industry, 47–48
  employed at port installations, 109–11
  employed by transportation zones, 122
  Gen. Gross's personnel policy, 77–78
  growth in TC, 56, 56n
  observations and conclusions, 408
  survey teams, 127
Petroleum, 72–73, 176, 367, 369, 381–85
Petroleum Administrator for War, 363, 384
Petroleum Branch, OCT, 72
Philadelphia, Pa., cargo port, 96, 99, 110
Philippines, 8, 17, 143–44, 293. *See also* Manila.
Pier operations, 262–71
  contract *vs* direct hire labor, 263
  cost of cargo loading, 267–69
  draft deferment of workers, 264

Pier Operations—Continued
efficiency of cargo loading, 264–66
negotiation of stevedoring contracts, 270–71
relations with labor unions, 268–69
shortage of longshore labor, 264
troop training for, 264
Planning
for demobilization of field agencies, 132–34
effect of late creation of TC, 406–07
long-range, role of, 18–23
Planning Division, OCT, 20, 22, 126, 162, 169, 326, 417
Plans and specifications, for ship conversions, 304-07
Pleasure travel, restricted, 347
Pool riding inaugurated, 396–97
Pooling of cargo, 193–94, 220–27
Port air officers, 106
Port commanders
and Army Transport Service, 107–09
basic responsibilities of, 95
list of, 423
proposals to transfer duties from, 103–04
relations with service commands, 105
relations with technical services, 106
responsibilities under Basic Logistical Plan, 170–71
responsibility for outports, 109
training functions, 109
Port companies, training of, 87
Port and Field Agencies Division, OCT, 216, 242, 417
Port of New York Authority, 177
Port supply catalogs, 242, 243
Port surgeon, 224
Port utilization, co-ordination of
Army-Navy duplication, 181
effort to conserve port facilities for transportation purposes, 176–78
effort to spread traffic, 179
situation on west coast, 179–80
Port Utilization Committee, 179
Port and Water Section, G–4, 48
Portland, Ore., subport, 97, 99, 110, 180
Ports of Embarkation. *See also* Port commanders.
defined, 196
functions of operating divisions, 101–03
general depots removed from, 107
organization, 100–03
personnel required for, 109–10
proposed subordination to service commands, 103
representatives of technical services at, 105–07
responsibilities of service commands toward, 105
selection of port commanders, 110–11
traffic handled, 99
wartime increase, 96–100
Potsdam Conference, 226
Prefabrication of ships, 156, 159
"Prestowed" vessels, 276n
Prince Rupert, B. C., subport, 53, 97, 99, 100, 110, 250
Prisoners of war, 56, 56n, 110, 300, 301n, 336, 338
Procurement
of new railroad equipment, 328–35
of small boats, 253–54
of vessels, arrangements with WSA, 198–99
Procurement Division, OCT, 307, 420
Procurement offices, 125
Property Disposal Division, OCT, 125, 420
Providence, R. I., subport, 97
Public Roads Administrator, 366
Pullman Company, 313, 328, 333, 335, 385
Purchase, Storage and Traffic Division, WWI, 32, 32n

Quartermaster Corps, 33, 35, 66, 70, 83, 90, 106. *See also* Quartermaster General, Office of.
Quartermaster General, Office of, 68, 87, 93, 111, 138, 140–41, 146, 147, 177, 200–01, 229, 239, 244, 313, 314, 316, 358, 406, 407–08. *See also* Commercial Traffic Branch; Transportation Division, Water Transport Branch.
and army transportation in World War I, 28–35
developments preceding Pearl Harbor, 35–42
early months of World War II, 42–50
and establishment of Transportation Service, 50–54
transportation for War Department placed under jurisdiction of, 35
Quebec, subport, 97
Queen Elizabeth, 6, 222, 224, 226
Queen Mary, 6, 222, 224, 226, 227

Radar, 248–49
Radio service on ships, 144, 247–48
Rail Division, OCT, 65, 113, 319, 326, 350, 372, 376, 379, 390, 392–93, 421–22
Railroad equipment
efficient utilization of, 341–49
procurement of, 328–35
Railroad Industry Advisory Committee, 325
Railroad manpower, 335–41
Railroad open storage yards, 117
Railroad repair shops, 391–94
Railroad Retirement Board, 340
Railroads
Alaska, 9
basic relations with, 312–19
car loading forecasts, 315–16
Car Service Division, AAR, 312–14
certificates of necessity, 327–28
efficient utilization of equipment, 341–49
estimate of performance, 323
fares, 314, 318
German, 23
Japanese, 26, 26n
manpower, 335–41

Railroads—Continued
Mexican, 9
passenger schedules frozen, 347
percent of Army traffic handled by, 311, 321
procurement of new equipment, 328–35
proposed integration with motor carriers, 311
state regulation of, 348–49
survey of capacity of, 324–25
temporary government control of, 349–53
training of troops by, 123–24
utility, 63, 63n, 64, 117, 375–81
wartime expansion of traffic, 319–23
western, limited capacity of, 323–28
in World War I, 312
Railway Labor Act, 351
Railway War Board, WWI, 30–31
Randall, George C., 313
Rationing
gasoline, 395
tires, 309, 395–96
Reciprocating engines, for Liberty ships, 156
Reconstruction Finance Corporation, 40, 141
Recreation of troops, provision for, 16–17
Recruitment and Manning Organization of WSA, 233
Red Ball motor express route, 91
Regulating stations, 90, 112, 114
Reilly, Lt. Col. John H., 303
Repatriation, ship conversions for, 307
Replacement parts, shortage of, 394
Requirements and Distribution Branch, G–4, 38
Requirements and Distribution Division, OCT, 420
Research and development, 125–26
Research and Development Division, OCT, 419
Research and Review Branch, OQMG, 37
Reservation bureaus, 117, 122
River transportation. *See* Waterways, inland.
Roderick, Col. W. B. N., 227
Rodgers, Ted V., 358
Roosevelt, Franklin D., 5, 42, 44, 44n, 141, 155, 190, 191, 192, 194, 319, 351–52, 353
conferences with Churchill on utilization of shipping, 221–22
creates ODT, 45
creates Strategic Shipping Board, 44
creates WSA, 44
declaration of an unlimited emergency, 139
establishes Council of National Defense, 39
initiation of American-British planning, 18–19
intervention in shipping crisis, 295–96
orders seizure of railroads, 349–50
and shipbuilding program, 159, 162, 163, 164, 165, 167–68
Ross, Maj. Gen. Frank S., 38, 38n, 288
ROUNDUP, 6–7
Rubber, 141, 363, 364, 395–96. *See also* Tire conservation.
Rubber Survey Commitee, 396
Sabotage, 231, 318–19, 336
Safety, provision for, 129, 235, 239, 240, 266, 336
Salter, Sir Arthur, 165n, 229
San Francisco Port of Embarkation, 29n, 41, 46, 58, 77, 97, 99, 110, 143, 144, 171, 256
Sartor, Col. R. H., 424
Schnorkel, 153
Scofield, Col. Frank C., 71
Searsport, Maine, cargo port, 97, 99, 110
Seattle Port of Embarkation, 46, 97, 99, 100, 110, 200, 250
Secretary of War, 147, 253–54, 341, 365
Security at the ports, 128–29. *See also* Sabotage.
Selective discharge of vessels, 293, 296
Selective Service, 10, 259, 264
and civilian crew members, 236
and railroad workers, 336–41
Senate Special Committee Investigating the National Defense Program (Truman Committee), 193, 317n, 331, 341, 354n, 362n, 363
Senate Subcommittee on War Mobilization, 1
Service commands, 103–05, 114–17, 119
Services of Supply. *See* Army Service Forces.
Seventh Fleet, 174
Seward, Edgar C., 270
Shakedown cruises for troopships, 208
Ship activity reports, standardization of, 296
Ship allocations, planning of, 163–76, 195–97
Ship construction
balanced program maintained, 161–62
basic types built by Maritime Commission, 155–58
British concentrate on combatant vessels, 154–55
co-ordination between merchant and naval programs, 160–61
relation to ship losses, 149–51
wartime achievement, 153–56
Ship conversions, 138–39, 299–307. *See also* Ship repair.
of cargo ships, 299–301
co-ordination of, 181–85
effort to speed up programs, 207–08, 305–06
plans and specifications, 304–07
for repatriation, 307
specialized types, 301
supervision of, 301–05
survey of troopship and hospital conversion programs, 305–06
Ship Conversion Unit, OCT, 303, 304
Ship detention in theaters, 282–99
Ship employment, central control of, 163–76
Ship failures in convoy, 216
Ship losses, 148–53. *See also* Submarines.
Ship repair. *See also* Ship conversion.
co-ordination of, 181–85
foreign vessels, 184–85
master ship repair contract, 183
Ship transfers, from Army to Navy, 145–47

Ship transportation agent, 238–39, 241, 242
Ship utilization efficiency
cargo ship turnaround time, 279–80
detention of ships in the theaters, 282–99
difficulty of "full and down" loading, 273–79
loading time in home ports, 281–82
summaries of oversea port performance, 284–85, 298
troopships turnaround time, 272–73
Shippers' regional advisory boards, 315
Shipping
Allied total, 30 June 1945, 165
Army-Navy effort for co-ordination, 169–76
British-American co-operation, 164–65, 220–27
central control of ship employment, 163–76
early military requirements, 136–44
effort to develop uniform procedures, 130–31, 211
Merchant Marine Act of 1936, 153–54
Roosevelt seeks to insure maximum utilization of, 139–40
submarine threat, 148–53
total of all nations at start of World War II, 135–36
wartime ship construction, 153–55
Shipping Control Committee, ETOUSA, 288
Shipping Control Committee, WWI, 30, 31, 288
Shipyards, expansion of, 7, 155, 158–59, 159n. *See also* Ship conversion; Ship repair.
Ships, operation of
armament and gun crews, 245–46
assignment and operation of small boats, 249–55
civilian crews on ocean-going vessels, 229–39
efficient utilization of, 271–82
food service on transports and hospital ships, 243–45
maintenance and voyage repairs, 239–40
proposals regarding marine personnel, 260–61
radio service and radar, 247–49
supplies for vessels, 241–43
SICKLE, 7
Siddall, H. W., 314
Signal Corps, 39, 107, 247, 248, 249, 301
Sixth Supplemental National Defense Appropriations Act, 198
Skagway, Alaska, subport, 97, 250
Slack, Lt. Col. James E., 423
Sleeping cars, 329, 334
Small boats. *See* Boats, small.
Somervell, Lt. Gen. Brehon B., 47n, 58, 62, 63, 66, 129, 222, 284–85, 292, 319, 362
Army representative on JMTC, 162
controversy with WSA over loading of Army cargo vessels, 190
and convoy arrangements, 213, 215n, 218
and co-ordination between OCT and ASF staffs, 72
creates a Transportation Division, 50
Somervell, Lt. Gen. Brehon B.—Continued
favors joint Army-Navy transportation service, 413
and Navy crews for Army transports, 207, 207n, 209
and powers of ICC and ODT, 370–71
and problem of ship detention in ETO, 288
and railroad manpower shortage, 337, 338
relation of port commanders and service commands, 103
relation of zone transportation officers and service commands, 116
relations with Gross, 78–80
and shipbuilding program, 162, 172
on submarine sinkings, 1–2
South America, 11
South Pacific, 170–71, 173–74, 283
Southwest Pacific, 171, 174, 251, 283
cargo discharge performance, 298
shipping congestion in, 291–98
transportation organization handicaps, 84, 294–95
vessel requirements for intratheater shipments, 284
Soviet Protocol Committee, 167, 180, 180n
Soviet Union, 4, 9, 11–12
Lend-lease supplies loaded at west coast ports, 180
loading vessels of, 282
transatlantic routes to, 20, 22
Spanish-American War, 29
Spare parts depot ships, 301
Staging area company, 90
Standard tables of allowance, 241–42
Standardization
of plans and specifications for ship conversions, 305, 306
of port organization, 100–01
of stocks for vessels, 241–43
of zone organization, 120–22
State Highway Traffic Advisory Committees, 355–56
State regulation
of motor vehicles, 355–56
of railroads, 348–49
Steel shortage, 159, 159n, 163
Stevedoring, 262–71. *See also* Pier operation.
Stevedoring and Ship Facilities Branch, OCT, 179, 270
Stewart, Brig. Gen. George C., 291
Stilwell, Lt. Gen. Joseph W., 76
Stilwell Road, 11
Stimson, Henry L., 190, 192, 249
Stokely, Col. Carlin C., 423
Stokes, Col. M. B. Jr., 3n, 168n, 169n, 224n, 285n, 299n
Stone, Col. Raymond C., 424
Storage. *See also* Transit Storage Division.
at the ports, 95, 100, 192

Storage—Continued
use of ships for, 287, 296
Stowage, 86, 265, 274, 274n, 276, 276n
Strategic Shipping Board, 44–45, 164, 187, 253
Strategy, transportation as a factor in, 2–10
Stratton, Brig. Gen. James H., 288
Strikes, 318–19, 334
highway freight carriers, 364–66
temporary government control of railroads, 349–53
zone industrial relations officers duties, 120
Styer, Maj. Gen. W. D., 51, 80, 104, 232
Subcommittee on War Mobilization of the Senate Committee on Military Affairs, 193
Submarines, German, 1, 7, 9, 75, 215–16, 309. *See also* Ship losses.
Allies unprepared to meet threat, 151–52
destruction of, 152
number of, 148, 152
Submarines, Italian, 152
Submarines, Japanese, 152, 214
Subversives, 237–38, 237n
Suicide planes, 292
Sunderland Tramp, type of ship, 156
SUPERGYMNAST, 6
Supply Divisions in Zone Transportation Offices, 120, 125
Supply Priorities and Allocations Board, 329
Surgeon General, The, 229, 244, 335, 385–90

Tank Car Advisory Committee, 384
Tank Car Branch, OCT, 382, 383, 384
Tank cars, Army, 381–85
Tank landing ships (LST's), 161
Tankers, 176
Taylor, Lt. Comdr. George E., 211
Tehran, 12
Territorial passenger associations, 314
Theaters of Operations. *See also* Overseas Commands.
CofT's responsibilities toward, 57–58, 84–94
control of ship utilization in, 282–99
Transportation organization in, 82–84
Third Service Command, 123
Tire conservation, 394, 395–96
TORCH, 6, 7
Toulmin, Col. Harry A., Jr., 70
Towing. *See* Tugs.
Track scaling, dispensed with, 343
Tracks
access, to Army installations, 317, 318
storage, at western ports, 324
Tractor-trailer buses, 400
Tractor-trailer combinations for freight, 91
Traffic control agencies, 111–12
Traffic Control Branch, OQMG, 37
Traffic Control Division, OCT, 73, 81, 112, 205, 315–16, 318, 319, 343–44, 345, 359, 368, 373, 376, 421
Traffic regulation units, 88, 90
Traffic Weight Agreement, 343
Training, 86, 87, 88, 128, 133–34. *See also* Military Training Division.
as function of CofT, 57–58
by port commanders, 109
of shipyard employees, 159
of TC troop units, 66, 87, 88, 123–24
TC unit training centers, 54–55, 123–24, 133–34
training vessels, 228, 301
Trainmasters, 379
Transit Storage Division, OCT, 112, 113, 289, 422
Transport Review Section, OCT, 345
Transport Surgeon, 243–44
Transportation Act of 1940, 354, 355, 367
Transportation Advisory Group, 37, 358, 367–68
Transportation Annex to the War Department Basic Plan, 133
Transportation Branch of G–4, 38, 40, 48–50, 51, 143, 147, 406, 407
Transportation Commissioner, 39, 40, 177
Transportation Control Committee, 47, 126, 181, 373, 412
Transportation Corps. *See also* Chief of Transportation, Office of.
creation of, 54–55
personnel, 56
troop units overseas, 90
Transportation Corps School, 109, 124, 134
Transportation Division, OQMG, 35, 37, 38, 48, 241, 358, 406, 407.
Transportation Division, SOS, 50
Transportation of Persons Branch, OCT, 394
Transportation Service, SOS
becomes Transportation Corps, 55
established, 50–54
Transportation zones. *See also* Zone transportation officers.
creation of, 113–14
functions of zone transportation officers, 114, 117–20
installations included, 425
officers in charge, 424
opposition to zones, 114–15
organization, 120–23
relation of zone transportation officers to service commands, 114–16
territories, 424
Transports. *See* Troopships.
TRIDENT Conference, 7
Troop kitchen cars. *See* Kitchen cars.
Troop sleeping cars, 334
Troop staging areas, service commands seek control of, 103–04
Troopships
allocation of, by WSA, 197–98

Troopships—Continued
Army-Navy competition for, 144–48
British vessels used by U.S. Army, 222, 224
efficient utilization of, 271–73
Navy operation of Army vessels, 205–08
new cargo ships converted into, 299–301
operated by Navy, WWI, 32–33
survey of conversion program, 305–06
turnaround cycles, 272–73
Trucks, Army, for oversea operation, 91
Trucks, commercial, use by Army, 354–59
Truman Committee. *See* Senate Special Committee Investigating the National Defense Program.
Tugs, agreement with Navy and WSA on use of, 210

Turnaround cycles
of cargo ships, 279–82
of troopships, 272–73
Turnaround time of freight cars, 342

U-boats. *See* Submarines.
UGS convoys, 217, 218
Under Secretary of War, 38, 45, 48, 50
Unit hospital cars, 385, 386, 387
"United States Army and Navy Shipping Procedures," 211
United States Railroad Administration, WWI, 31, 312
Universal service, 341
Uruguay, 222
U. S. Employees Compensation Act, 230
U. S. Maritime Commission. *See* Maritime Commission.
U.S. Shipping Board, WWI, 32–33
USSR. *See* Soviet Union.
Utility Railroads, 63, 63n, 64, 117, 375–81

Vehicles. *See* Automobiles; Buses; Motor vehicles; Trucks.
Vendor's Shipping Document, 130
Victory ships, 156–58, 301
Voorheesville, N. Y., 41
Vulcania, 226

Wacs, 127
Wage administration manual, 128
Wakefield, 146, 147, 222
Wanamaker, Col. William W., 294
Wansbrough-Jones, Col. Llewellyn, 227
War Board of the Port of New York, WWI, 30
War Department Code Marking Policy Committee, 130
War Department General Staff, 19
War Department Labor Policy Governing Vessels, 231, 231n
War Department Manpower Board, 61
War Department Priorities Committee, 31
War Department Shipping Document, 130
War Manpower Commission, 338–39, 340
War Overtime Pay Act of 1943, 232
War Plans Division, WDGS, 144, 147–48, 200
War plants, transportation for workers, 394–402
War Production Board, 159–60, 188–89, 306, 325, 327, 330, 331, 335, 339, 340, 344, 361, 363, 366, 396, 410
War Shipping Administration
allocation of ships by, 164, 167, 173, 195–97, 198
attitude toward Army requests for port facilities, 178–79
controversy over control of shiploading, 190–92
creation of, 187–88
duties of War Shipping Administrator, 188–89
financial arrangements with Army, 198–200
memorandum on interdepartmental relationships, 189–90, 189n, 198–99
and problem of cargo pooling, 193–94
proposal to centralize shipping operations under, 193
relation of Transportation Corps with, 186–200
and shipping congestion in the theaters, 295
War Department liaison with, 199
War Transportation Efficiency Committee, 341–42
Warren, Col. Otey Y., 305
Warwick, Col. Andrew D., 270
Washington, 146
Water Division, OCT, 73, 86, 179, 195, 196, 210, 211, 219, 224, 228, 231, 233, 237, 240, 241, 242, 243, 244, 253, 254, 255, 257, 258, 260, 270, 281, 301–03, 304–07, 420–21
Water Transport Branch, OQMG, 29, 30, 31–32, 35–37, 42
Waterways, inland, 367–69
Watkins, Col. Duval C., 303
Weed, Col. Thomas J., 282n.
Welding, in ship construction, 156, 159
West Point, 146, 147, 222
Western Defense Command, 107
Western Military Bureau, 314
Western railroads, limited capacity of, 323–28
White, R. B., 351
Whitney, A. F., 350
Whittle, Col. Calvin L., 424
Wilcox, Col. Herbert B., 71
Wilgus, Col. William J., 34n
Williams, Col. Harry G., 424
Williamson, F. E., 351
Williamson, Brig. Gen. William J., 316
Women, employed by railroads, 336
Work load index, 127, 127n
Work simplification study, 131
World War I, Army transportation in, 28–35
Wylie, Brig. Gen. Robert H., 61, 70, 180n, 390
on "cargo availability picture," 197
on Navy crews for Army transports, 206n
and problem of ship detention in theaters, 286
on relative efficiency of Army loading, 281

Wylie, Brig. Gen. Robert H.—Continued
visits MacArthur, 295

XYZ motor express route, 91

Yarmouth, 230

Zone and District Transportation Officers' Guide, 122

Zone supply officers, 120
Zone transportation officers. *See also* Transportation zones.
authority delegated by CofT, 114
list of, 424
personnel employed by, 122–23
relations with operating divisions of OCT, 114
relations with service commands, 114–16, 119

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